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Developments in News Print Price Situation

R. O. Sweezey States That American Publishers Association's Threat to Reduce News Print Consumption If Price Is Raised Indicates Complete Lack of Understanding of Canadian Position—Edward Beck, General Manager of Canadian Pulp and Paper Association, Declares That Increase of $5 Per Ton Is Really Necessary

[FROM OUR REGULAR CORRESPONDENT]

MONTREAL, Que., November 25, 1929.—A situation of great public interest, and one that may eventually have marked influence in political life, is developing here as a result of the current discussion over the price of news print. For some time past there have been rumblings in the political field in Quebec Province over the allegiance subservience of the Taschereau government to foreign interests, it being claimed that a situation has been created whereby the Quebec Government have largely lost control of the publicly-owned forest domain, by alienating it to wealthy American interests who are now dictating the policy to be pursued. A direct charge to this effect has been made in the several by-elections which have been held in recent months in this Province. The new leader of the opposition in Quebec Province is Camillien Honde, the Mayor of Montreal, and he is making this charge the base of a vigorous campaign, charging that Premier Taschereau has had to go to New York and go down on his knees to the president of the International Paper Company to plead with him for consideration, a charge that Premier Taschereau has vigorously denied.

Provincial Government's Position

Premier Ferguson, however, has now let the cat out of the bag, and has shown that not the Quebec administration alone, but the Ontario administration, consider themselves as having been put into an awkward position by the International Paper Company. It will be remembered that as a result of inter-provincial conferences last Fall an agreement was entered into for stabilizing the price of news print and distributing the orders among the mills so that each should have an equal tonnage in proportion to capacity. Premier Ferguson has now made the direct charge, in a public interview, that two large plants of the International Paper Company in Quebec Province are running at about 107 or 108 per cent of capacity while other mills in Ontario which should get a share of this extra tonnage are running at about 75 per cent of capacity. This amounts to a charge that the International Paper Company is not a party to the arrangement for the distribution of orders, and the inference that hope of their being brought into line is not very strong is contained in the further announcement of Premier Ferguson that "It is thought that to overcome the loss under which some mills are operating, a reasonable advance in the price of news print would improve the conditions."

Following on the visit of Premier Ferguson to Montreal, where he consulted with Premier Taschereau, and the two of them with the news print executives, Premier Taschereau during the past week has been in Toronto, ostensibly to be present at a fair. Premier Baxter, of New Brunswick, is also reported to have been a visitor. The inference is drawn that the Premiers of Quebec and New Brunswick have really been in conference with Premier Ferguson on the news print situation with the object of drawing up a plan to force the International Paper Company to co-operate more fully with the Canadian news print mills for a raise in the price of news print and for pooling of orders. The fact that the name of Premier Baxter has been brought into the discussion is regarded as significant, since the International Paper Company has a $40,000,000 pulp and power industrial expansion program now under way in New Brunswick, and since its first news print mill in New Brunswick, at Dalhousie, is now being completed, with an initial capacity of 250 tons per day, and a designed capacity of 450 tons.

International's Powerful Influence

As has been previously shown in these columns, the powerful influence exerted on the industry in Canada by the International Paper Company is shown by the fact that it owns or controls in Canada 15,610,782 acres of forest lands, more than equal to an area half the size of the land surface of the State of New York. The largest proportion of this is in Quebec Province. Much the largest proportion of this—some 13,000,000 acres, in fact, are Crown lands leased to the company.

That as far as Quebec Province is concerned the Provincial Government has been much too hasty in alienating pulpwood limits is the charge now being levelled against the administration. The *Montreal Star,* which is owned by Lord Atholstan, blames the present news print situation entirely to the action of the Quebec Government. In an editorial during the past week, it says:

"Several years ago it was pointed out to the Quebec Government that the persistent sale of pulp limits beyond the needs of the trade was pushing the news print manufacturers towards the brink of insolvency. Pulp limits were a standing temptation to any speculating boomster who knew how to induce the Government to yield to his demands. Any party knowing how to do it could get another tract of land, and a scientific promoter could always lure the public to take shares in a manufacturing company to take over the property which the Government was persuaded to lease.

"Every news print company organized in the last twenty years has secured from the Government at ridiculous prices Crown lands that should not have been leased. Every new concern secured these forest limits without real competition, because, the demand having been more than supplied already, there was no real compe-

tition at the so-called public sales, which might appropriately be called 'mock auctions.'

"Today the news print trade is embarrassed. The situation is so acute that the Government has been called upon to devise measures to save the situation which it has itself created by catering to the avarice of designing friends.

"It is now exceedingly doubtful if the Government can save the trade from serious financial difficulties. Having created at the rate of 100 mills where 85 were quite sufficient, the Government has been working towards a catastrophe which is not far off if a remedy is not devised—a catastrophe which would probably result to the injury of tens of thousands of wage earners who work in paper mills."

Plain Speaking on News Print Price

Meanwhile some plain speaking on the price of news print is contained in interviews by Edward Beck, general manager of the Canadian Pulp and Paper Asociation, and R. O. Sweezey, president of the Beauharnois Power Corporation and director of the Port Alfred Power and Paper Corporation.

Mr. Beck said: "The threat of the American Publishers Association to take steps to reduce the consumption of news print if the price is raised is a bit of bluff. If the publishers were making an uneconomic use of news print or rather if they could curtail their use of news print, it would show they are at present engaged in uneconomic use of paper, and that if they reduce the use of paper it would only result in ultimately increasing the price.

"The paper manufacturers, after all, have got to have a return on their business, which, at present they are not receiving.

"The point is that, if the publishers reduce the consumption of paper materially, and force the mills into a still lower quota basis of products the mills inevitably must get more per ton for the paper they produce than at present, in order to make a living.

"The paper producers have arrived at the conclusion that they cannot produce paper continuously without adequate return—which, at present they are not receiving.

"No Canadian company on the present price basis is earning an adequate return on the capital invested, and, if the publishers refuse to take that fact into consideration in connection with the prices they pay for paper, ultimately it must react to their disadvantage, because, if the paper industry is put on a basis permanently where there is no adequate return, expansion of the industry will cease and dry up, and there won't be enough news print to go round.

"I do not think the manufacturers are asking an excessive price. It would at the outside mean an increase of $5 a ton—and it might be less—and it is really necessary to the welfare of the industry.

"The paper consumer has the choice of getting cheaper paper for a time and ultimately paying a great deal more, or paying a reasonable price throughout and seeing the industry progressing and developing.

"If present prices continue you would not see a new mill built in Canada in the next five years."

Questioned as to the correctness of Premier Ferguson's estimate of the Canadian International Paper Company's ratio of production for the past ten months, Mr. Beck said his statistics showed that the Canadian International Paper Company's average of production for that period was 108.3 per cent of its productive capacity, and the average of the other Canadian producers was 81.6 per cent during the same period.

Mr. Sweezey said: "The stand of the United States publishers in regard to the threatened increase in the price of news print paper indicates a complete lack of understanding of the Canadian position. The semblance of financial greatness among Canadian companies is chiefly due to the unearned increment in the value of their leased timber lands which belong to the Provincial Governments.

"Though it has taken many years of effort on the part of forestry men to convince the people that Canadian forests were being recklessly destroyed, it is now quite apparent that the Premiers of Quebec and Ontario have become fully aware of the facts. Since the Provinces own the forests and are only leasing them to the paper mills, the Premier of any Province surely must be concerned.

"Provincial authorities have for some time prevented the export of pulpwood cut on crown lands. Yet nearly one million cords of pulpwood are annually exported from freehold lands in Canada, thus causing further aggravation. To stop this export, hope has centered on Federal action which for several good reasons has not been forthcoming. But the Provincial authorities have it in their power by other simple and quite legitimate means to prevent the export of such large quantities of raw material.

"To save Canadian forests from early depletion beyond repair, short of a century's effort, vigorous application of scientific methods in forestry practice must be adopted at once, and the cost of such an effort will be tremendous.

"We need to spend $40,000 to $50,000 daily the year round in applying remedies and preventive methods for the maintenance and restoration of Canadian forests. This means $5 a ton on paper produced.

"In the past, Canadian paper companies have been simply slaughtering the forest. This must stop. But it costs a lot of money to change methods.

"Besides, no Canadian company has been charging more than a quarter of the proper allowance for depreciation and obsolescence. Unearned increment based upon arbitrary values and unsound accounting has played too large a part in Canadian pulp and paper companies.

"Conditions in the industry are forcing Canadian companies into one big financial merger to save themselves from distress.

"The publishers of the United States should seek a clearer understanding of the situation. The time has come for a frank and open discussion as between publisher and manufacturer. The fact that one or two publishers have understood the situation and protected themselves by long-term contracts surely does not entitle all other publishers to demand the same privilege without taking any risk."

P. B. Wilson, general manager of the Canadian Newsprint Institute, which has been supervising the distribution of orders among the mills under the agreement arrived at last Fall, a few days ago issued a categorical denial that Canadian news print producers had agreed upon a stated increase in the price of news print.

The street gossip which had as "authoritative" the fact that an increase of $5 per ton over the existing price has been agreed upon for the 1930 contracts was scoffed at by the Canadian Newsprint Institute head. "There has been no official move, and none has been proposed in so far as I know," he added.

Process Engineers Bring Suit

Process Engineers, Inc., 501 Fifth avenue, New York City, have filed a suit against the Container Corporation of America, with head office at 111 West Washington street, Chicago, Ill., for the infringement of their process of continuous sizing, covered by U. S. Patent Nos. 1,589,947 and 1,558,845.

J. A. DeCew, president of Process Engineers, Inc., and the inventor of these processes, is a chemical engineer who has specialized in the art of sizing paper for the last twenty-five years and has taken out a large number of patents relating to this part of the paper making art.

Process Engineers, Inc., is a New York corporation and is the organization that owns and exploits the DeCew patents.

Mr. DeCew states that much as he regrets the necessity of having to bring suit for infringement against any paper manufacturer, nevertheless he is doing so in the interest of his many licensees in order to protect them from unlawful competition.

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3512

Demand for Paper Livelier in Philadelphia

Holiday Buying of Various Standard Grades Resumed With Greater Vigor During Past Week —Fine Paper Wholesalers Experience Fairly Good Amount of Advance Buying for 1930 Delivery—Fancy Wrapping, Tissues, Etc., Moving In Excellent Volume

[FROM OUR REGULAR CORRESPONDENT]

PHILADELPHIA, Pa., November 25, 1929.—With growth of demand for various grades of paper in the mid month there has been a livelier market that indicates holiday buying has been resumed with greater vigor. While this activity has been noted, dealers are more assured that there will be no interruption of Christmas business on account of the stock market's action. Many lines of paper are being offered in odd lots to clean up certain grades which are holding steadily in prices but which are laggards in Fall trading. Some distributors seem to have a surplus of wrapping papers and krafts which they are offering at this time. There has been an especially good market for fancy wrapping papers, tissues for wrapping and packing purposes, attractive fancy bags and sacks used by the merchants with gift packing, decorative papers, paper twines for tieing gifts, gummed tapes, glassines with Yuletide designs and in the colorings of the season, waxed papers of the finer grades for food products and fancy gift boxes and larger boxes for clothing in holly or Christmas designs. There is growth of orders for stationery and printing papers which will be used for announcements, greetings, or for advertising during Yuletide. Fancy papers for Christmas announcements are in demand and greeting cards and other card stocks are brisker than they were a fortnight or so ago, although the demand has been fairly well maintained through the passing month.

Though contracts have been secured for supplies of paper to hold over the closing weeks of the year there is a fairly good amount of advance buying for 1930 delivery. This is applied to the fine paper stocks consumed by the larger printers and publishers where volume shipments are the orders as usual. Those wholesalers handling uncoated grades of book papers are particularly interested in the coming year's supplies as are those who cater to buyers of the better grades of writing papers which like unfinished book papers have been active all season. Most orders now given cover the early weeks of the new year but do not extend far into the coming year. It is felt that the book paper manufacturers are not over stocked and already are fairly well sold up into the new year's production so that preparedness is the watchword of the consumer in reviewing the needs of the coming year. The steadiness of values, which are now at normal levels has also been influential in bringing about advance buying. Card boards of the finer sort are steady and are in the active list. Manufacturers of fine papers in this section of the country are stated to be from 5 to 15 per cent ahead on orders this season over that of last year, according to reports made to the various mercantile agencies.

A. S. Datz & Son Under New Ownership

Announcement has been made of the change of ownership of the long established Philadelphia paper box makers supply and printing paper house of A. S. Datz & Son, 16 South Marshall street. The new proprietor of the firm is the Louis Schulman Company, 465 Broome street, New York, also engaged in the sale of paper box manufacturers supplies. While the business has been purchased by the Schulman interest the firm will be continued under the old title. With its sale there retires from the paper trade the owner of the old concern, John A. Datz, who is one of the best known paper box supply dealers in this section of the country and scion of the pioneer box making family founded by William Datz in the Philadelphia territory and still linked with that industry. The Datz company dates back forty years to the founder, A. S. Datz, father of the younger and recent owner of the business. A. S. Datz came to this country from Germany about forty years ago to be associated with his brother, William P. Datz, in the paper box making industry and later to establish his own business. The business will remain strictly a paper box makers supply house as it has been in the past. No change has been made in the personnel.

Mt. Holly Products Handled by Curtis

With the change of ownership of the Mount Holly Paper Company, successors to Marr and McDonnell Company, to the newly transferred control of Curtis & Bros., Philadelphia, and Newark, Del., the products which are produced in the Mt. Holly mills will be handled through the Quaker City executive offices. The Mount Holly mills, located in Mount Holly Springs, Pa., produce bonds, ledgers, envelopes and writing papers, and have been annexed to the Curtis Bros. mills. The sales and executive offices of Curtis & Bros. are maintained here in the Ledger Building, where Irwin F. Megargee is sales manager for the line of book paper, cover papers, and other grades made under the Curtis mark.

Paper and Cordage Association Meets

The Philadelphia Paper and Cordage Association held its monthly meeting at the Adelphia Hotel last Friday. With a full attendance there was manifested deep interest in the talk by William C. Mansfield, manager of the Philadelphia branch of the Union Paper and Bag Corporation, whose personal researches in the field of advertising through trade products were astounding in the vast possibilities which he had outlined from actual contact with this phase of the industry and its practices. Mr. Mansfield is one of the alert paper executives who has been resourceful in developing trade expansion by seeking new avenues for consumption and in creating markets to the advantage of dealers and consumers.

In his talk he gave an illuminating survey of bag advertising and what it has done for the trade in sales of volume proportions. He urged the dealers to take advantage of the use of paper products as an advertising medium. He laid before the trade his own statistics garnered by practical contact and outlined plans that he had submitted to customers to stimulate sales of bags and other paper commodities. He gave statistics of the number of houses reached through bag advertising. When the practical side of this trade factor was expounded by actual figures of persons reached and the avenues provides for advertising the members were astounded at its broad range and volume of paper products which were employed in this phase of sales work. Then taking other industries where paper entered into advertising, such as wrapping papers, sacks, merchandising bags, display bags and covers, and converted paper products, he gave an unlimited field for future efforts for those merchants who adopted his policies.

Nomination of officers followed: President, George K. Hooper, Hooper Paper and Twine Company, who is the present president; Vice President, Frederick I. Brower, manufacturers representative for several large paper mills; Treasurer, Frederick S. Balch, Schuylkill Paper Company, and Secretary, G. Edkins, of the Maurice Jute Mills.

Paper Men Join Typothetae Activities

Members of the fine paper fraternity linked with the printing and publishing industries are uniting with the Typothetae of Philadelphia in promoting the better interests of the allied groups comprising the graphic arts. Among the 150 members of the Typothetae who were gathered at the first of the bi-monthly luncheons in the month were associates of the paper trade who are on the paper committee of the organization. Announcement

Save Waste

A good *profit* may be shown on your operation by turning *Waste Fibres* into Insulating Board. Your *product* will make *profit* for your customers by *saving heat* in cars, houses, refrigerators, etc. Conservation is the order of the day. First step—let us make full sized samples from *your own waste*—slabs, edgings, bagasse, cornstalks or "what have you."

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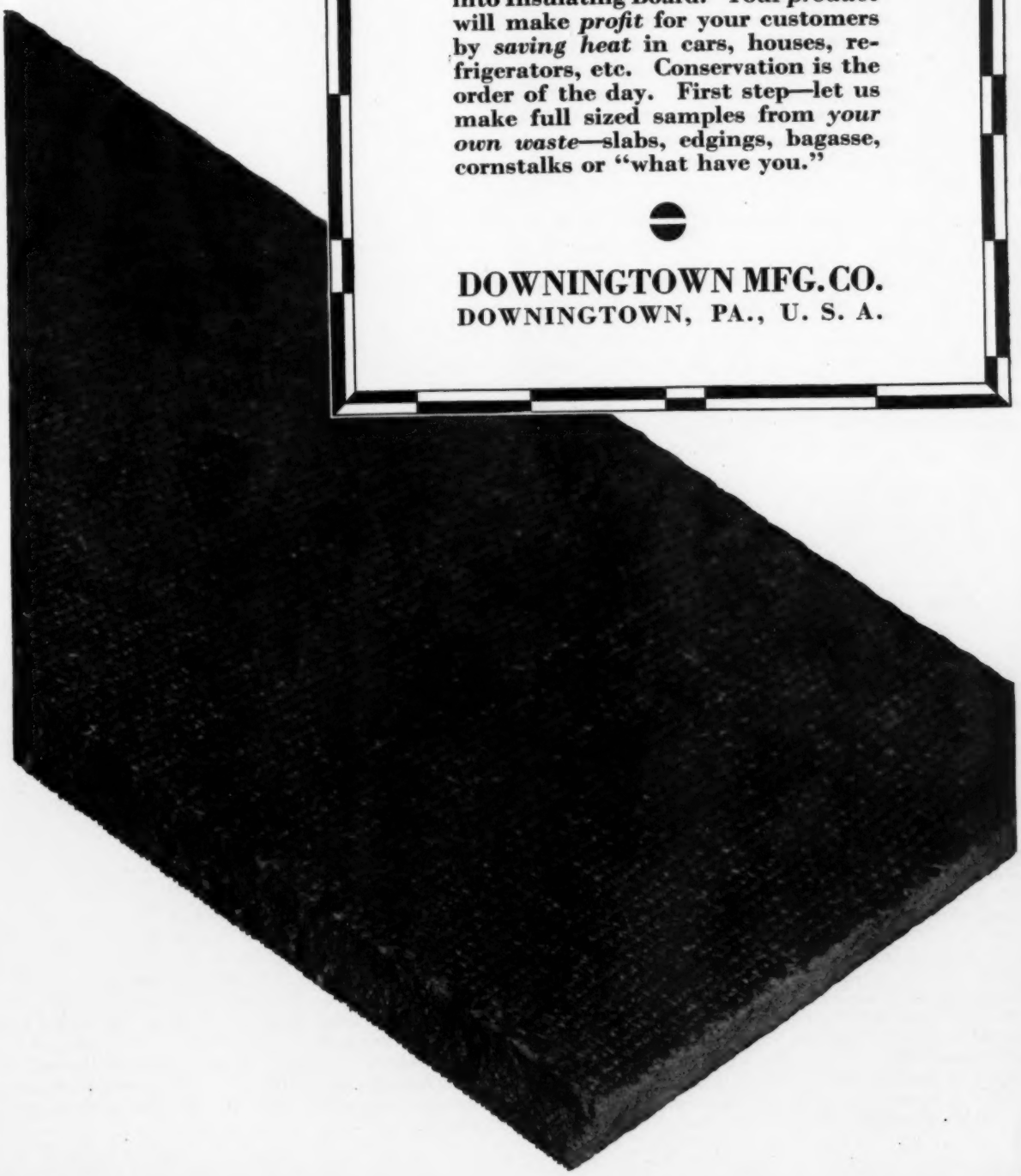

was made at this meeting of the opening of the sales classes which are given in a series of educational talks on paper and printing. Leonard Peck, of the Paper House of Pennsylvania, has been the leading spirit of the paper trade in promoting interest among paper salesmen in these educational business talks which are given monthly throughout the winter season by authorities on the subject of salesmanship. There is represented in the classes now forming a large paper trade membership.

Matthias & Freeman Distribute New Box Papers

As the mercantile trades are in the market for a wide range of fancy boxes in Christmas covers the Matthias & Freeman Company, 5th and Race streets, are disposing of a wide range of colorful and modern designs in Yuletide box makers fancy covers of the firm's own make. Under the Sunrise mark the firm has developed a wide range of artistic and attractive box tops that have been especially adapted for fancy boxes used in department stores and other mencantile trades where high grade covers are used. Trade congratulations have been extended to Charles Matthias who returned home last month after a tour on the road to greet a new arrival in the family—Allan Matthias— whose birth was heralded to the proud father as the first son to join the family circle. Following a brief sojourn at headquarters for the occasion the younger member of the firm again journeyed to the South to spend six weeks in making the rounds of the box making trade.

Keickheffer Container Co. Putting Up New Drives

There is being installed in the plant of the Keickheffer Container Company, of Delair, N. J., new sectional drives which will be attached to the wet end of one of the cylinder machines. This includes electrification of seven cylinder molds and several presses which is a comparatively new innovation in the last year or so in the way of paper mill equipment along electrical lines. This method of electrification through sectional drives at the wet end of the cylinder increases the life of the belts. The work of installing these drives is being done by the General Electric Company and is in conjunction with the General Electric sectional drives.

Gift and Art Shows Planned for 1930

Paper manufacturers, importers, and dealers, who cater to the gift and art and social stationery trades will participate in the various Gift and Art Shows which are sponsored by the National Gift and Art Association, with headquarters in Room 644 Drexel Building. Announcement of the dates upon which the Gift and Arts Shows for 1930 will be held has already been made by the local headquarters. The National Gift and Art Show for New York will take place February 24 to 28 at the Pennsylvania Hotel. The Philadelphia Show will be staged on March 3 to 7 at the Adelphia Hotel, while the New England event will be held in Boston from March 10 to 14 at the Parker House. The exhibitions of paper wares at these shows are in the line of papeteries, portfolios, bulk fancy stationery, announcements, cards, gift wrapping papers, fancy paper twines for gift wares, novelty tissues, decorative papers, engravers and social stationery, papers, favors and other like wares which may be handled by gift shops or stationers.

Holland Chemist Inspects Hercules Plants

M. J. Riemersma, technical service manager of the N. V. Hercules Powder Company, Rotterdam, Holland, is in Wilmington as a visitor at the offices of the Hercules Powder Company. Mr. Riemersma, following visits at several Hercules plants, will return to Rotterdam in early December.

The N. V. Hercules Powder Company of Rotterdam is the exclusive agent for resale of Hercules products in Europe. Turpentine, rosin, pine oil, nitrocellulose, and purified cotton linters are the principal export items of the Hercules company.

Mr. Riemersma directs the technical service, investigates new uses and markets for chemicals, and advises on European patents and processes. He is a native of Holland.

American chemical business abroad is increasing rapidly and promises to represent a considerable percentage of United States exports, Mr. Riemersma asserts.

Story of Consolidated Paper Box Co.

The Consolidated Paper Box Company of San Francisco, Cal., has just issued an attractive booklet which describes the evolution of the company.

"Long ago, men like Warren, Stern, Bastedo, Raisin, Thiebaut, Hammerslag, Gilman and Gruenberg, who are officers and directors of Consolidated, took a leading part, as pioneers, in changing bulk selling of commodities into today's way of packaging with paper boxes, folding boxes, cartons and colorful display units. The companies which these men developed in competition with each other—seven leading firms in the San Francisco Bay district—controlled about 70 per cent of the total visible market in their fields of operation.

"A natural condition existed here for merging these competitive forces into one powerful organization, for each of the seven have been showing steady progress, good net earnings and a generally satisfactory condition. Notwithstanding their individual successes, each was limiting the opportunities of the others. Too much duplication; too many operating overheads. Duplication of costly equipment and large inventories; high cost of transbay shipping.

"In October, 1928, five of the companies were incorporated into one—Consolidated Paper Box Company, comprising: Independent Paper Box Company, Oakland; Enterprise Paper Box Company, Raisin & Zaruba, York-Stern Paper Box Company and Thiebaut Brothers. In addition a half-interest was acquired in the Union Paper Box Company, San Francisco.

"Operating equipment of two plants was then transferred to the other three, increasing production beyond the former volume of all five. Instantly a saving of around $70,000 was effected in operating economies. Later, two more companies joined the Consolidation: Boxboard Products Company and Gilman-Petterson Carton Company, both of San Francisco. Thus the Consolidated Paper Box Company gained a dominant position in Central and Northern California in both the 'folding' and 'set up' box divisions of the industry. Four enlarged plants are now in full operation. 346 First street, San Francisco, is devoted to 'set up' boxes and almost entirely to the making of candy boxes.

"1205 Kirkham street, Oakland, and 775 Brannan street, San Francisco, are also 'set up' paper box plants. Here the scenes are similar to First street, but the boxes are for merchandise other than candy.

"The box board plant at 200 Paul avenue, shows still another phase of the industry. Here everything goes out flat—tons and tons daily. Attractive packages, delivered flat and folded. Instantly they are opened up as complete containers. Butter, batteries, drugs, suits, cereals and every conceivable commodity is sold today in boxes created in this great plant of Consolidated Paper Box Company.

"Consolidated Paper Box Company has been called 'a merger of minds' as well as of physical properties. The keen minds of the men whose management ability has helped build the great paper box industry on the Pacific Coast will now co-operate and no longer compete. Pulling together, instead of apart, they are developing a great institution.'

Not Much Improvement in Norway

[FROM OUR REGULAR CORRESPONDENT]

WASHINGTON, D. C., November 25, 1929.—The improvement on the pulp and paper markets of Norway which is confidently looked forward to after the dullness of the summer months, has been slow in materializing. The thin printings and cap markets in particular are very quiet. Greaseproof and kraft wrappings are in somewhat better demand. The wood pulp market on a whole shows considerable firmness. Stocks of strong and easy bleaching sulphite are nearly exhausted, and the bleached sulphite market is somewhat stronger. The ground wood market is somewhat stronger following the numerous inquiries coming in recently.

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3516

Backus-Brooks Co., Ltd., May Extend Interests

Hardy S. Ferguson, Consulting Engineer, Confers With General Manager J. T. McLennan, at Fort William, Ont.—Plans Under Study Involve Manufacture of Wood Products—Persistent Rumors That Company Is Considering Erection of Large Insulite Plant

[FROM OUR REGULAR CORRESPONDENT]

TORONTO, Ont., November 25, 1929.—Proposed extension of the interests of the Backus-Brooks Company, Ltd., at the head of the lakes, was the subject of a conference at Fort William, Ont., a few days ago between Hardy S. Ferguson, New York, consulting engineer of the company, and J. T. McLellan, general manager of construction, with present headquarters in Fort William. This portentous announcement was forthcoming from Mr. McLellan, but beyond that statement he declined to discuss or amplify the nature of the proposed new construction now under contemplation by the corporation heads. From the official's reticence it is deducted that plans of the company are in embryo state and that the time is as yet premature for a definite pronouncement. Mr. McLellan did add, however, that plans under study by the company involve the manufacture of wood products, confirming somewhat persistent rumors that the company has under consideration the erection of a large insulite industry at the head of the lakes. E. H. Lowe, engineer and surveyor of the Backus-Brooks Company, is in Fort William and it was learned that officials inspected properties fronting on river and lake with a view to determining their suitability for proposed industrial structures. This work, it is understood, will take about two weeks to complete. Backus-Brooks officials would not state whether options have been obtained on properties under survey. Following the conference with Mr. McLellan, Mr. Ferguson left for the West.

To Rebuild the Westminster Paper Mill

According to word reaching Toronto two million dollars will be spent in re-establishing the plant of the New Westminster Pulp and Paper Company at New Westminster, B. C., which was destroyed by fire last July. J. J. Herb continues as president of the company under the reorganization plans announced a few days ago, and R. F. Arnett is vice-president and general manager. The mill will continue to specialize in wrapping papers of various kinds. Machinery for the manufacture of paper napkins and paper towels will also be installed. Approximately 30,000 square feet of floor space will be required for the plant and about 100 employees. The plant will be in production early in the new year.

Popular Paper Secretary Joins Benedicts

W. Ivan Moffitt, Toronto, the popular secretary of the Canadian Paper Trade Association, with offices on Bay street, Toronto, is receiving the congratulations of his many friends, the occasion being his marriage a few days ago to Miss Elsie Loretta Cowan, a highly esteemed young lady of this city. Mr. and Mrs. Moffitt will spend a short honeymoon in Quebec, following which they will take up residence on Lonsdale road, Toronto.

Paperboard Co. Enjoying Good Business

The Canadian Paperboard Company, with main plant in Toronto, is enjoying good business and its earnings are, it is understood, showing a gratifying increase for the current fiscal year over those of the last fiscal year. The current financial year ends on March 31 next. In 1928 the company had heavy expenses in connection with the erection of its new mill in Toronto. Net earnings, however, amounting to $174,088, were only $24,000 less than in the previous year. There was no dividend paid on the common, but a larger amount was written off for discount, while a balance of $20,221 was carried forward into the profit and loss account, which now stands at $104,674 after adjustments.

The new Toronto mill was first turned over in October, 1928, but it was only toward the end of March last that it began to produce paper at the anticipated rate and with the expected economies. Operations during the current year have been on an improved cost basis. Production has suffered somewhat owing to over production in the paper board industry, while prices were lower. The matter of making the supply more closely approximate demand has been satisfactorily settled, which has resulted in an improvement of operations.

During September plant operations were carried on twenty days. October was a better month and the mills operated for 23 days. November plant operations are expected to be at about capacity and for the balance of the year the outlook is considered favorable. As regards price the situation has not been altogether favorable this year. It is understood, however, that with the beginning of the new year prices will be on a better basis and will allow of improved earnings. This betterment will also apply to other companies in the same line of busienss.

Canadian Paperboard is one of the largest manufacturing concerns in the Dominion, owning plants at Montreal, Frankford, Campbellford and Toronto. The Campbellford mill, with a capacity of 30 tons daily, has not been operating for several months. In addition there is a daily production of 20 tons of ground wood pulp from the Frankford mill. Gross production for the fiscal year 1929 was 34,812 tons of paper board. This compared with 30,770 tons in the previous year. Production for the current year is expected to compare favorably with that of other years.

Manitoba Paper Timber Restricted

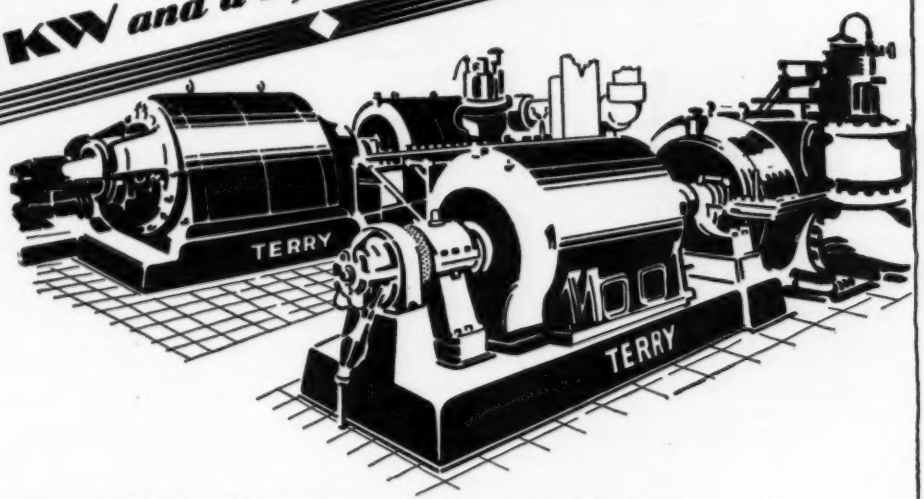
Manitoba Paper Company, subsidiary of the Abitibi Power and Paper Company, finds itself in a difficult position, pending the settlement of the natural resources controversy which exists between the Dominion and Provincial Governments. In 1927 the company issued bonds to construct a mill with a productive capacity of 250 tons of news print daily on the understanding that the Dominion Government would ensure to it a wood supply equivalent to 6,000,000 cords. The mill was constructed and the Government set aside a large area in the middle north of Manitoba from which pulpwood areas were to be selected by the company. These selections were to proceed till the 6,000,000 cords were obtained, when the remaining parts of the areas were to be released for exploitation to other commercial companies. However, it was discovered by Manitoba Paper Company's cruisers that the entire area which had been set aside only contained 2,516,244 cords of pulpwood. Accordingly the company has asked the Government to take necessary action to increase the reserve supplies of wood.

While the Dominion Government is willing to do this, the Provincial Government is apparently delaying final settlement till the control of these resources finally passes out of the hands of the Dominion Government into the hands of the Province. An agreement in this respect has been reached and the necessary legislation to effect the transfer will be put through at the next session of Parliament. While the Provincial Government delays, other private companies are becoming interested in news print development, such as the British syndicate which holds a priority for White Mud Falls on the Nelson River. Manitoba Paper Company's news print mill came into operation in 1928 at Pine Falls on the Winnipeg River. The site is capable of development to 75,000 hp., but as yet is undeveloped. The company obtains its power requirements from Manitoba Power Company.

Printing Trade Want Book Paper Cut

Active measures are being taken by the Canadian printing trades to bring about a reduction in book paper prices. For some time past there has been a wide difference of opinion on what consti-

A 500 KW and a 1,000 KW TERRY



"AS NEAR PERFECT SERVICE AS SUCH EQUIPMENT CAN GIVE"

Writes A Leading American Paper Mill

—And this Terry turbine user goes on to say:

"We installed a 500 K.W. in 1923. The service given by this unit was so satisfactory that we later installed a 1000 K.W. unit.

In paper making, continuous power without any speed variations is very important, in order to prevent variations in paper thickness. Our Terry Turbines have given us excellent service viewed from all angles."

If you value performance of this kind, investigate the Terry turbine. Cooperative service of Terry engineers is at your disposal.

The Terry Steam Turbine Company

TERRY SQUARE, HARTFORD, CONN.
OFFICES IN PRINCIPAL CITIES

Steam Turbines · Gears · Shaft Couplings

T-1038

tutes reasonable prices. The printing trade claims that it is unfairly handicapped by the cost of book paper in Canada as it permits competition from American printers, who are able to get their paper at a cheaper rate. On the other hand Canadian book paper mills claim they need a greater volume of production to meet foreign prices. It is claimed that the paper mills have not met the potential Canadian demand, in that though claiming to have adequate manufacturing facilities to fill the total requirements of the Canadian printing trade and publishing industry they have permitted the importation of $1,052,028 of book and fine papers in one year. Printers say that apparently the mills are determined to persist in their harmful policy. Figures for the six months ending September, 1929, are quoted, showing an increase of 69 per cent in imports over the corresponding period of 1928. Importations subject to drawback decreased but the volume of paper on which full duty was paid increased tremendously.

In this connection *Printer and Publisher*, published in Toronto, says, "Canadian conditions must certainly be serious when printers and publishers consider it good business to import great quantities of high grade paper on which they pay 35 per cent duty. Canadian printers and publishers are importing paper in increasing volume because, in the first place, Canadian book papers are too high in price, and, in the second place, the quality of the Canadian product is not consistent with the price. Moreover some Canadian mills are of no help to their customers in solving book paper problems, while on the other hand, foreign producers invariably show a willingness to, and actually do, give unstinted co-operation."

Big Pulpwood Contracts for Ontario

Charles Cox, timber contractor, of Port Arthur, Ont., whose operations last year in Northern Ontario were the heaviest on record, announced on his return to Port Arthur a few days ago from a business trip to Chicago and Detroit, that he had secured a large pulpwood contract for the Detroit Sulphite Company and local mills, and a railway tie contract given him by the Canadian Pacific and Canadian National Railways. The pulpwood contract calls for the cutting and delivering of 40,000 cords. Mr. Cox says his pulpwood operations will be confined to the Thunder Bay district, with camps located at Black Bay, Nipigon and other points. Work will be given between 500 and 600 men and the camps will be equipped with modern machinery, including caterpillar tractors.

Notes and Jottings of the Trade

A. Huntley, formerly with the Hodge-Sherriff Paper Company, in both Toronto and Montreal, has arrived in Toronto, his old home, where he will in future reside and engage in the accountancy business.

The birds of Canada, so beautifully lithographed in full color on last year's calendar of the Howard Smith Paper Mills, are having their names used to designate new lines of bristol boards put on the market by the company, as "Wren," "Goldfinch," "Oriole," etc.

Mr. and Mrs. F. R. Thorn, of Quebec, sailed recently on a trip to the Old Country. Mr. Thorne is sales manager for Price Bros. & Co. He recently underwent an operation for appendicitis and his trip abroad is for the purpose of recuperating.

Neil Powter, of the Toronto office of the Howard Smith Paper Mills, has returned from Montreal and St. John, N. B., where he had charge of the company's exhibit of Produced-in-Canada papers.

E. H. Wilkinson Company, Ltd., paper mill representatives, have moved from the second floor of the Melinda Building on Melinda street, Toronto, to 411 in the same building, where they have more commodious quarters.

Luzerne Mill to Resume Operations

HADLEY, N. Y., November 25, 1929.—Preparations are under way for the resumption of operations at the Luzerne Paper Mill, which has been shut down for the past four months because of financial difficulties. The new management has been receiving stock and a number of the former employees have already reported for duty.

Boston Paper Trade Happenings

[FROM OUR REGULAR CORRESPONDENT]

BOSTON, Mass., November 25, 1929.—Two speakers gave addresses at the November meeting of the New England Paper Trade Association held at the Harvard Club of Boston, November 21, at which President Arthur E. Ham presided. Major Oliver M. Porter, manager of the National Kraft Paper Manufacturers Association spoke on the work of the association. His address was particularly interesting because kraft paper represents the largest tonnage of any kind of paper sold by members of the Wrapping Paper Division. Major Porter flew to Boston, leaving New York at 3 o'clock and arriving in Boston at 6 o'clock. Frank Floyd, secretary of the National Paper Trade Association, spoke on the credit situation and trade practices. The following nominating committee was appointed to bring in names at the January meeting: M. O. Byrne, chairman; Willard Loud, Leon Young, Chas. A. Esty and Col. Chas. S. Proctor. George H. Sweetnam was elected a member. About 45 were present, including, besides members from Boston, a number from Providence, Worcester and Springfield.

Arthur E. Ham & Sons are distributing booklets featuring two new shades of Roxburghe, in Tangerine and Green, made by the Worthy Paper Company, Mittineague, Mass. This line also includes gray, buff, olive, rose, tunxis, capri and sauterne. All shades are used for pasted stock for covers and cards. The same firm is distributing a large swatch containing five new colors of Washington Brilliant Cover, made by the District of Columbia Manufacturing Company, Washington. The colors are geranium, hydrangea, cerulean blue, scarlet and black. The modern demand for more color has brought about this addition.

In Carico Flashes of Carter, Rice & Co. Corp., edited by John F. Wilson, C. A. Esty, managing director, notes the high spots in a recent trip of 7,000 miles. Among them were Lassen, the only active volcano in the United States, but sufficiently distant to be safe. Mr. Esty took a trip with Manager Charlie Beckwith to the Grays Harbor Mill at Hoquiam, where Management Bond is made. Mr. Esty writes that "We found the Grays Harbor plant to be the last word in paper mill construction" and being run by a Massachusetts Technology graduate, a native of Natick, Mass. The largest day's run up to that time was 165,000 pounds of paper and approximately 120 tons of wood pulp. It is a one-machine mill at present, trimming 184 inches of paper and capable of developing a speed of 1,000 feet per minute, we were told." Mr. Esty mentions their own Herbarium Mounting Paper, for which orders have been placed from Leland Stanford, University of California and other universities on the Pacific Coast.

The following members of the organization of the United Paperboard Company, New York, have been calling on the trade in Boston: W. L. Chadwick, general director of sales; Max Zimmerman, manager of manufacturing; Frank Sharpless, sales manager Wabash Coating Mills, and Dean Newall, manager of the United Paperboard's mill at Wabash, Ind.

Philadelphia Quartz Opens in Baltimore

Establishment of a branch plant in Baltimore by the Philadelphia Quartz Company, 121 S. Third street, Philadelphia, for the manufacture of silicate of soda has been announced by H. Findlay French, director of the Industrial Bureau of Baltimore.

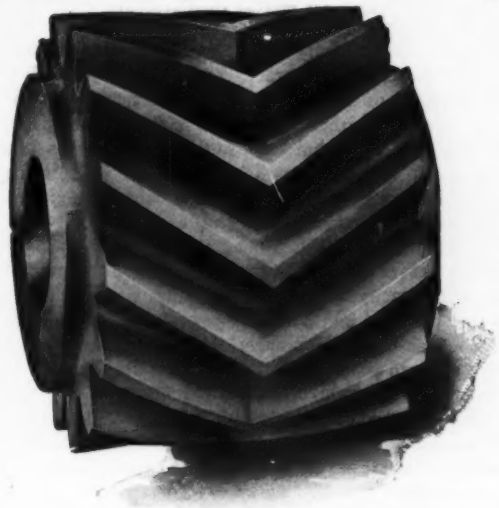
The Philadelphia Quartz Company is the oldest and largest producer of silicate of soda in the country. It will celebrate its 100th anniversary in 1931. Its Baltimore plant, work upon which will begin immediately, will be situated upon a four-acre tract of land in Locust Point, at Fort avenue and Decatur street.

The company's general office is located at Philadelphia, Pa., and it now has factories at Rahway, N. J., Chester, Pa., Gardenville, N. Y., Anderson, Ind., Kansas City, Kansas, St. Louis, Mo., Utica, Ill., and the Philadelphia Quartz Company of California, Berkeley,

Farrel Sykes Herringbone Gears

Always Transmit Motion Smoothly and Silently

The deeper the action of gear tooth contact is studied the more apparent it is that the herringbone gear of high helix angle is the most satisfactory gear to use for parallel axes. Continued silence of operation and great resistance to wear are characteristics of the Sykes continuous tooth gear; and yet they cost little or no more than spur gears.



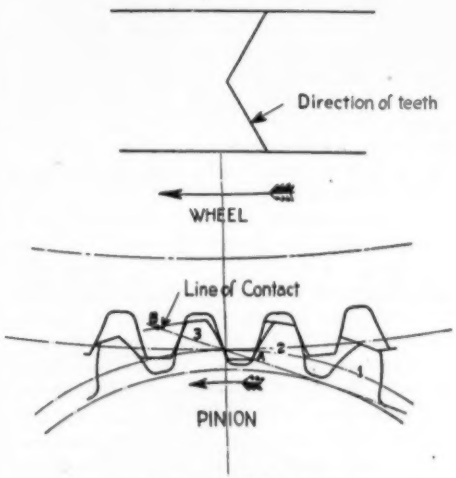


FIG. 9
VIEW IN PLANE OF ROTATION.

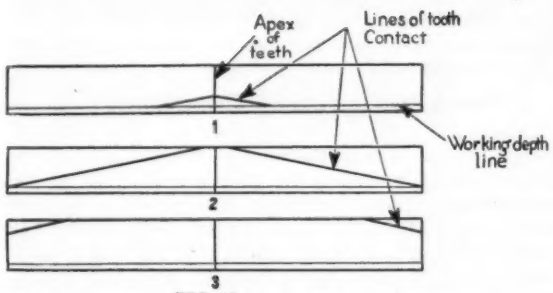


FIG. 10
DEVELOPMENT OF TEETH IN CONTACT.

WE illustrate on this page the nature of the contact between a pair of Sykes gears having 23/119 T. The lines of contact are oblique across the face of the teeth showing that the pressure is evenly distributed across each tooth, from the tip to the working depth line, so that there is no tendency for the contour of the teeth to wear unevenly, and that a Sykes gear may be depended upon to operate smoothly after wear has taken place.

In a straight tooth gear the lines of contact are parallel with the axis of the gear and there is a fluctuating number of teeth in contact. This results in a deformation of the tooth contours which causes noise in operation.

Specify "The Gear with a Backbone"

FARREL-BIRMINGHAM CO., Inc.

SUCCESSOR TO

Farrel Foundry & Machine Co., Ansonia, Conn., and Buffalo, N. Y., and Birmingham Iron Foundry of Derby, Conn.
Address replies to this advertisement to Buffalo Plant 344 Vulcan St., Buffalo, N. Y.

Chicago Paper Market Conditions Favorable

Fine Paper Industry Is Experiencing Better Demand Than For Some Years Past—Wrapping Papers and Tissues Going Forward In Seasonal Volume—Paper Board Situation Showing Signs of Improvement—News Print Consumption Satisfactory

[FROM OUR REGULAR CORRESPONDENT]

CHICAGO, Ill., November 25, 1929.—For the first time in a number of months nearly every line of paper carried and represented in Chicago is reported in favorable condition. Snappy Fall weather and the approach of the holiday season have combined with favorable developments within the various industries to make for a healthy market. Now that hand-to-mouth buying has been here long enough to be counted as a natural factor Chicago firms are depending upon volume and shipping economies plus redoubled sales efforts to maintain a strong position.

News print, notably, is beginning to receive advance notice of the holiday season with mills running at a point between 80 and 85 per cent capacity and larger newspaper issues taking up the production. Tissues and wrapping papers are also beginning their Christmas rush and, dire prophecies to the contrary, bid fair to establish a record year for business. Prices are firm and the outlook is considered bright. The board industry is overcoming its price difficulties and, with this hurdle past, should have a good winter season as demand has been reported good. The volume in fine papers is said to be the best in some years while the book and cover markets are also holding up exceedingly well. The ground wood situation is reported serious and representatives of this line are watching the market intently. In some sections, notably New York State and Minnesota, the supply of pulp is fairly good. In others, however, lack of rain has caused a serious shortage and prices are firming up rapidly, according to reports.

Chicago Paper Association Elects Officers

The Chicago Paper Association begins its new fiscal year with a number of familiar faces on the board of directors and with the strong possibility of continuing therefore practically all of the constructive program which was instigated twelve months ago. At the annual meeting held at the Bismarck Hotel, November 19, Leo F. Altholz, president, was elected chairman of the board, while D. F. Peck, of the Hanchett Paper Company, was elected to succeed Mr. Altholz as president. Earl Beier will again be vice president in charge of the industrial division. James Danehy, of the Schwartz Paper Company, was re-elected secretary and treasurer. Following the installation of the complete roster of executives those present at the annual dinner presented Mr. Altholz with a wrist watch in token of appreciation for the constructive work carried on under his administration. Mr. Danehy was presented with a radio as a measure of appreciation for his efforts as secretary of the organization.

With the firm of Stevenson, Harrison & Jordan, engineers, again acting in an advisory capacity for the Chicago Paper Association the program for the coming year will be more or less a continuation of the past twelve months' effort. Studies of costs, salesmen's compensation, truckage, etc., will be given further consideration in an effort to place the coarse paper market in Chicago on a sound and profitable basis.

Use of Sulphate Pulp Discussed

A large representation of the Chicago Division of the Salesmen's Association of the Paper Industry met at the Hamilton Club last Monday to hear Mr. Monsson, of the Forest Products Laboratories, discuss "The Use of Sulphate Pulp in White Papers." The discussion was one of the most interesting yet staged by the association in its weekly program.

No further speaker's programs have been arranged for, according to Harold Knott, president, until December 16, when the Rev. George Craig Stewart, of Evanston, Ill., chaplain of the Salesmen's Association of the Paper Industry, makes his annual address. This meeting is one which the Chicago division always looks forward to and an unusually large attendance is expected.

Hugh Strange, of the John Strange Paper Company, Menasha, Wis., was elected president of the Paperboard Industries Association at the recent annual meeting held in New York City, November 19, 20 and 21. Information concerning other officials elected was not available today from the Chicago offices. H. S. Adler, secretary, reported a very successful meeting, well attended and featured by a number of developments of importance to the industry.

News of the Trade

Mail from the offices of the West Virginia Pulp and Paper Company, 35 East Wacker Drive, includes Westvaco Inspirations for Printers, No. 49, and stock sizes and weights quotations in Standard Mill Grades and for Enamel Papers. This issue of Westvaco Inspirations features an article on "Ideas" and includes a number of fascinating color illustrations bringing out some striking uses of ideas by nationally known advertisers. Foreign work from Germany, Austria, Switzerland, France, Poland, Holland, and Great Britain, adds a great deal of interest to the issue. Methods of using still life to give emphatic sales force and the use of nature and art in advertising also form a valuable part of this Westvaco number.

An excellent mailing piece describing Louvain Cover paper was mailed out this week by the Reading Paper Mills, of Reading, Pa., and distributed in Chicago by the Seaman Paper Company. An enclosure tells an interesting story about the Moorish Period and forms an excellent background for the copy describing the Louvain line. Louvain Cover comes in five shades and in white combined with Wove Antique, Laid Antique and Laid Plate finishes. It is described as rugged, affording maximum protection and providing excellent printing and folding qualities. The work is printed on Louvain Cover.

Bermingham & Prosser, Chicago, is sending out this week a description of Oxford Folding Coated papers under the title "Beauty and the Broadside." The paper is reported to have perfect folding qualities, provides a uniform printing surface designed for superior half-tone reproduction and holds a uniform standard of quality maintained for the longest run. Three color illustrations and one black and white effect are admirably used to bring out the quality of the paper.

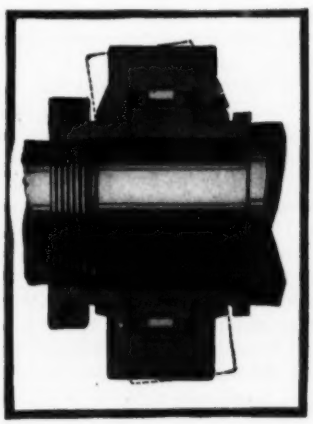
Significant Restriction by Quebec Government

Notice is given by the Quebec Department of Lands and Forests of an auction sale to be held on December 19 next at the Parliament buildings, Quebec City, of nine blocks of timber lands in the regions of Abitibi, Upper St. Maurice, and the North Shore.

The significant announcement is contained in the notice that the wood is to be used exclusively for the purpose of supplying sawmills. The blocks offered run from 3¼ square miles to 49 square miles, and total 142 square miles. The regulations as to cutting follow the latest regulations of the department in the matter. The bonus of adjudication is fixed at $400 per square mile, and in addition the bids, over and above stumpage dues, must commence at $1 per thousand feet, board measure, and each overbid must not be less than 20 cents over the preceding bid.

A glimpse of the lower press roll assembly on a No. 5 cylinder machine in the Manayunk (Pa.) Mill of the Container Corporation of America.

WHERE *the load is* Heaviest *and the duty* Hardest!



FOR nearly three years, without any trouble whatever, NORMA-HOFFMANN Precision Roller Bearings have carried the exceptional load of the lower press rolls on this cylinder machine.

The duty is extremely heavy. Added to the weight of the lower roll (carried entirely on the bearings) is the weight of the upper roll plus the pressure exerted by a hand-screw. But even under this tremendous burden, PRECISION Quality is demonstrating the superdependability for which it has always stood.

Let our engineers share with you their long experience in applying Precision Bearings to paper mill problems.

NORMA-HOFFMANN
PRECISION BEARINGS

NORMA-HOFFMANN BEARINGS CORPORATION STAMFORD, CONN., U.S.A.

N-1034

Northern Paper Mills Officials Optimistic

Sales of Recently Acquired Subsidiary, the Tuttle Press, of Appleton, Wis., Are Largest This Month In Company's History—Corporation Making Arrangements to Increase Capital —Paper Mill Experts to Address Forestry Conference

[FROM OUR REGULAR CORRESPONDENT]

APPLETON, Wis., November 25, 1929.—Excellent business conditions are reported by the Northern Paper Mills, Green Bay, Wis. Despite the disturbed condition of business in general right now, there was considerable optimism in the reports given at a meeting of the board of directors last week.

Sales of the company's recently acquired subsidiary, the Tuttle Press Company, Appleton, Wis., are the largest this month in the company's history. The October record, the largest in history, will be reached again in November also by the Northern. The company will declare its regular quarterly dividend on December 15, 1929. Arrangements are also being made by the corporation to increase its capitalization through an issue of second preferred stock amounting to $500,000. There is to be no change in the common stock, of which there are 75,000 shares of no par value, and the first preferred, amounting to $130,000.

Kimberly-Clark Addition

Another proposed enlargement has been announced by the Kimberly-Clark Corporation, Neenah, Wis. Plans are being drawn up for an addition to the finishing department of its mill at Kimberly, Wis. The addition will be one story high and will be 122 by 127 feet in size. Part of the building will be used for shipping and storage. Its cost will be about $100,000.

Forestry Conference to be Held

Two paper mill experts have been summoned for a forestry conference which is to be held at Madison, Wis., on December 3. The gathering was called by the state land commissioner and is to be attended by all graduate foresters in Wisconsin. Consideration will be given to extension of the state's program on behalf of conservation and reforestation.

M. G. Kilp, forester of the Nekoosa-Edwards Paper Company, and C. G. McLaren, forester for the Tomahawk Kraft Paper Company, have been scheduled as headline speakers. Mr. Kilp will explain methods of planting trees for pulpwood, and Mr. McLaren the planting for saw logs. Other speakers will include C. L. Harrington, forester for the Wisconsin Conservation Commission, and others interested in the land, lumber and economic phases of this work.

This conference was conceived after the holding of the forestry booster conference recently at the Nekoosa-Edwards Paper Company's tree preserve at Nekoosa, Wis. The value was shown there by Mr. Kilp and others of scientific application to a solution of this problem and an effort will now be made to extend this activity elsewhere.

At present the state of Wisconsin is appropriating $300,000 annually for forestry work but this sum causes the progress to be very meager each year. The value of work thus far done to save the forests is becoming evident, however, and increased appropriations are expected. The conservation commission is trying to overcome the deficiency in the meantime by enlisting the aid of private land owners to devote their property to tree planting under the liberalized timber laws.

Consolidated Buys Stevens Point Property

The Consolidated Water Power and Paper Company, Wisconsin Rapids, Wis., has purchased a tract of land costing $15,000 at Stevens Point, Wis. The land is in a good location on the Wisconsin river next to water power and has flowage rights which were acquired some time ago by the Jackson Milling Company, a subsidiary of the Consolidated company. The property was purchased from the Stevens Point Box and Lumber Company and will be vacated by them. The former owners lost their buildings sometime ago by fire.

News of the Industry

Preparations are being made for a big closing banquet of the safety school which is being conducted by the Consolidated Water Power and Paper Company and other interests at Wisconsin Rapids, Wis. James J. Plzak, safety engineer of the company, has been engaged as toastmaster. The principal speaker will be Capt. Denny P. Upton, of New York. The school is holding weekly sessions with more than 600 attending.

An accomplishment of no small proportions is recorded in the announcement of the Consolidated Water Power and Paper Company, of Wisconsin Rapids, Wis., that all of its mills operated during the month of October without a lost time accident. This perfect record was achieved by 1135 employees working eight hours a day and it is a rare instance with the company when such a large number avoids injuries for such a long period. A special message of commendation was issued by George W. Mead, president, expressing his pride at the feat.

Tainter gate hoists, made by the D. J. Murray Manufacturing Company, of Wausau, Wis., are now in use in every state in the union but three, acording to a sales survey made by the company. These hoists are now included on most power dams. They are motor operated and prove an immense improvement over the old hand wheel type. The rapidity with which the flowage of dams can be shifted has also helped to make them popular. The equipment includes traveling hoists operated by motor. Among the dams recently equipped were the 540-foot span of the Marinette and Menominee Paper Company, Marinette, Wis., where twelve are in use, and the Alexander dam of the Wisconsin Valley Electric Company at Merrill, where there are eleven Tainter gates, each 26 by 16 feet in size.

The Nekoosa-Edwards Paper Company, Nekoosa, Wis., is exerting its efforts to prevent abandonment of what is known as the Babcock Branch of the Chicago, Milwaukee, St. Paul and Pacific Railroad, serving the territory where its mills are located. A recommendation has been made by W. Burl Dalton, traffic director, that the Interstate Commerce Commission deny the petition for abandonment.

A checkup is to be made in the state of Wisconsin of the law requiring one rest day in seven for all industries. Paper mills will be included in the inspection, in order that the Wisconsin Industrial Commission may learn whether the law is being obeyed. Concessions were made to paper mills recently so necessary repairs could be made on Sundays without violating the measure. Safety devices, rules and regulations also will be checked up.

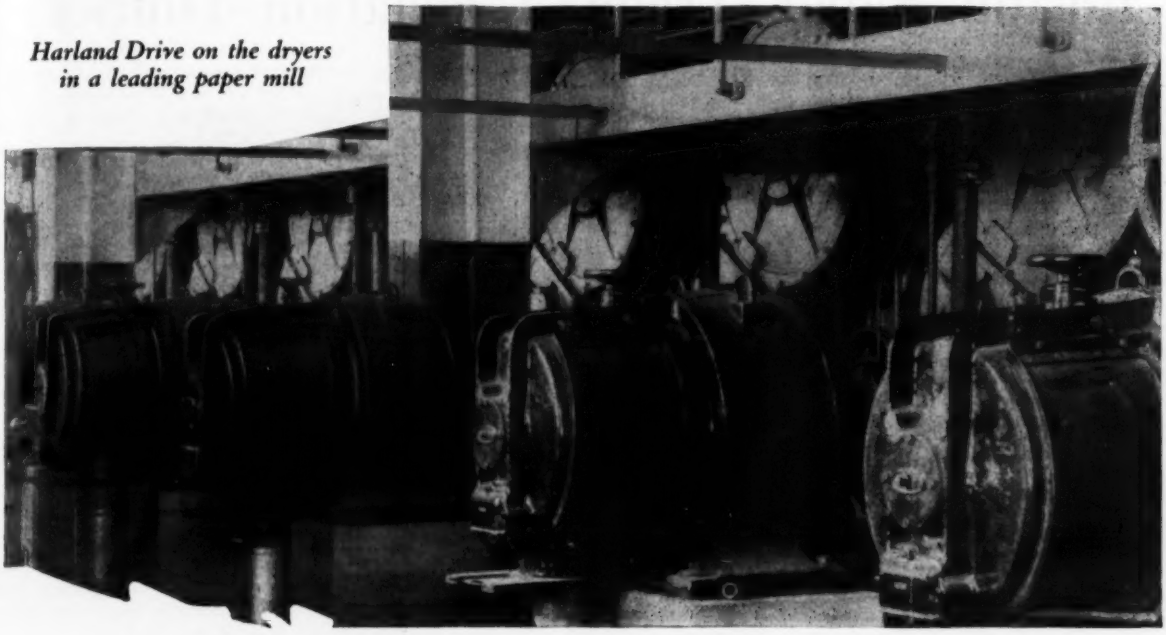
B. D. Rising Addition Planned

[FROM OUR REGULAR CORRESPONDENT]

GREAT BARRINGTON, Mass., November 26, 1929.—Plans for a new addition to the B. D. Rising Paper Company of this town have been completed and it is expected that the contract will be awarded soon and work completed in March. The finishing department is to be enlarged by the construction of a three-story brick, concrete and steel structure, 180 x 75 feet in size.

Last summer a three story addition was built primarily for extending the paper machine but also to increase the storage capacity. This addition was 52x50 feet in size, and new boilers and fuel economizers were installed about the same time.

Harland Drive on the dryers in a leading paper mill



The drive that does not "question your authority"

There's never any doubt as to who is "boss"—once you have installed Cutler-Hammer (Harland) Drive on your paper machines. In the words of one mill superintendent, C-H Drive is "unique in the absolute control it gives". Absolute *accuracy* and *flexibility* of control are secured . . . whether on multi-speed job machines or on high-tonnage, "long distance" runs.

Sections are cut out, started, stopped at the will of the operator . . . speed changes made at the rate of 100 feet a minute. Operators have gone from 30 lb. paper to 60 lb. paper without a break. Any desired change in draw is easily made; once the draw is set, it is maintained as long as desired. On "tonnage" machines, 50-hour runs are commonplace.

Fewer breaks, fewer interruptions to production, less paper wasted, greater uniformity of quality, world's tonnage records set and reset . . . such is the performance of C-H (Harland) Drive wherever it goes.

You see the first signs of its profitableness when you install it. For frequently its simplicity of installation eliminates the no-dividend period of "cut and try"—produces salable paper the first day stock is put on the wire. You'll find its maintenance far below that of other drives.

Its flexibility, its simplicity, its savings in maintenance, its space economies, make C-H (Harland) Drive of vital interest to every mill executive. Write today for the new descriptive book "Keeping Paper on the Reel".

Write today for this interesting booklet "Keeping Paper on the Reel"

CUTLER-HAMMER, Inc.
Pioneer Manufacturers of Electric Control Apparatus
1274 St. Paul Avenue Milwaukee, Wisconsin

CUTLER HAMMER

Harland Electrically Interlocked Paper Machine Drive

(8649)

Boston Paper Trade Association Dinner

[FROM OUR REGULAR CORRESPONDENT]

BOSTON, Mass., November 25, 1929.—Members of the Boston Paper Trade Association listened to interesting discussions of conditions in Russia at the fall meeting of the organization at the Exchange Club, Boston, November 20. About 100 were present. A reception was held from 6 to 6:30. At a business meeting Leon M. Poore, of the Stone & Andrew Company, was elected a regular member. The following nomination committee was appointed to report at the annual meeting next spring: Col. Chas. S. Proctor, chairman, John Vivian, Chas. L. Baird, John E. A. Hussey and M. L. Madden.

In introducing the first speaker, President Hubert L. Carter mentioned a visit to Russia which he and his son had made. He said Major-General Victor A. Yakhontoff, Russian Army, retired, had lived through some of the stirring times in Russia and had also been in the printing and publishing business.

General Yakhontoff Speaks

In his address General Yakhontoff noted the complexity of the subject, the vastness of the country, the extreme contrasts, with the intelligentsia and the very illiterate, the complete autocracy and the great number dependent on the government. In his visit to Russia, after twelve years' absence, he observed the transformation from apathy to unbelievable energy. He maintained that in spite of the different races, Russia is homogeneous, with 77 per cent of the population Russian. In discussing the natural resources, he said the people were poor because only 3 per cent of the resources have been developed.

The speaker noted the so-called Soviet system, saying the Bolshevists were a split from the followers of Marx. The country has advanced in education for there were a greater number of schools than before the war. The number of doctors and hospitals is far from adequate, but a great deal is being done for mothers and children. The speaker outlined the financial struggles of Russia since the war, but that notwithstanding the superhuman tasks, they had achieved restoration and put back production to the pre-war level. He cited figures showing increases. He referred to the difficult task of converting farmers to socialism and a real revolution in the use of land and grain. A most important feature is the "collective farms," and to make the proposition attractive the government offered large credits, machinery, manufactured goods and other things, and the plan has worked successfully. The Five Year Plan provides for industrialization, collectivization and mechanization, the spending of 86 billion roubles, and overburdening the population by taxes.

In conclusion General Yakhontoff said that no one would seriously deny that the achievement in production is tremendous, that the energy applied is amazing. No one can forget the suffering of civil war and revolution. One would ask: Are really the methods applied and the doctrines successful? It is very probable that the Government will have to go very far for the future. One can expect that the stasis has to be met by the anastasis. They should have more respect for religion, and the spiritual and moral must be worked out. The speaker would not prophesy anything, but felt that people in a land which had produced such men as Tolstoi, Dostoevsky and leaders of science, could not fail to bring about a beautiful life in "our mother country."

Professor Karpovich Addresses Meeting

President Carter then introduced Professor Michael Karpovich, lecturer on Russian History at Harvard University. Professor Karpovich differed in his point of view from General Yakhontoff, but said he had not been to Russia since 1917 and would not be allowed to go there, because he differed in his opinion, and he regarded that fact as a commentary on Russian politics. He referred to the old autocracy, but said there was still an autocracy in Russia, a "benevolent despotism." From one and a half to two millions are forced to live outside, but they represent the educated class. He spoke of himself as a liberal and an historian or a student of history, and by liberal he meant spirit of freedom rather than radical.

He objected to methods of reconstruction in Russia because they are based on negation of individual liberty. He did not believe in political and social miracles, and said the present is a temporary phase in historical development. He said that the Bolsheviks or the Communists were the tidal wave which recedes after every revolution. The system being enforced is one of enthusiasm and intimidation, and some feature of the present may survive.

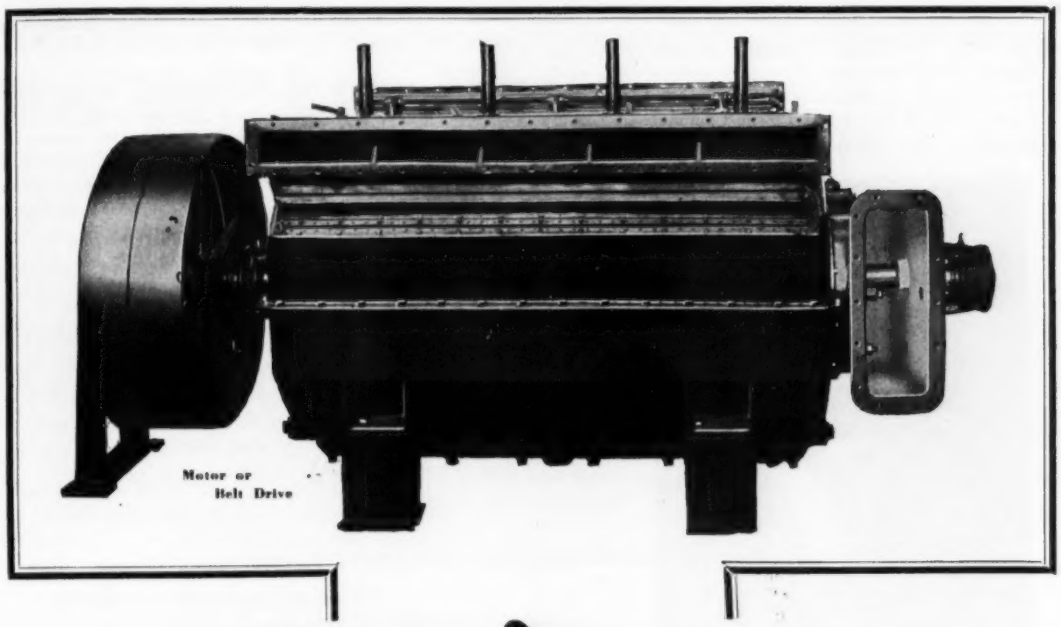
He quoted from a speech of Stalin who said that in the twelfth year of the Revolution conditions were more favorable for the development of capitalism than Communism, and that "we must make a new and determined effort to force through socialism and industrialism before it is too late." He spoke of the necessity of raising the number of new engineers as some of the old ones had been shot. He doubted the success of the collective farm system. It is the springtime of the Communist experiment and it is well to wait until fall before counting the chickens.

Professor Karpovich, with General Yakhontoff, believed firmly in the future of Russia, but was not so optimistic in regard to Russia at the present time. He felt that no matter what the form of government was that no government had any right to attempt such an experiment by such drastic methods. He spoke of the work of the Federal Farm Board in this country, and admitted that it might be feasible, but in Russia the idea was backed up by shooting. In his closing words he said the experiment was either good or bad.

Among Those Present

Those present were: Hubert L. Carter, Victor A. Yakhontoff, F. Bendel Tracy, M. Karpovich, C. A. Esty, F. E. Floyd, E. D. Bement, N. Harrower, A. P. Mitchell, R. H. Welch, Paul D. Caskey, J. F. Blackman, F. H. Blackman, Russell S. Madden, Leon Hatton, Geo. M. McCarthy, Cal J. DeCoster, N. S. Clark, J. A. Mead, R. N. Humes, E. R. Lyman, J. L. Munro, T. C. Green, Fred B. Korbel, M. A. Park, E. L. Cummings, E. L. Wood, W. N. Stetson, Jr., John B. Van Horn, John H. Brewer, Allan I. Hatfield, H. A. Hurlbert, H. A. Sanders, K. B. Fullerton, Jr., Kendall Wyman, Erving F. Lowe, M. L. Allen, A. F. Fay, D. P. Weston, Irving N. Esleeck, C. Frederic Wellington, Earl G. Fowler, D. K. Brown, John W. Vivian, W. E. Porter, Jr., William Ross, Winthrop L. Carter, T. Henry Savage, Chas. W. Fields, John E. A. Hussey, Jediah P. Jordan, Frederick J. Jordan, Courtlandt B. Griffin, Walter L. Muzzey, Charles S. Proctor, F. H. Keep, J. G. Swift, Jr., W. Gardner Very, Harold C. Upham, Harry C. Thayer, William A. Merrill, Frank B. Cummings, W. J. Raybold, Lionel Walden, Wm. J. Bigley, Herbert J. Casey, Arthur C. Hall, Arthur M. Burr, Alfred L. Gooch, Willard C. Loud, W. W. Jenks, A. P. Allen, P. E. Weston, C. W. Nelson, C. W. Towsend, W. H. Hilton, John Kelley, E. P. Hay, R. P. Teele, J. H. Roach, Herbert A. Lindenberg, J. D. Heffernan, J. J. O'Brien, Wm. B. Livermore, D. D. Coffin, A. D. Coffin, Herbert C. Ham, Ernest L. Pope, James L. Ham, John F. Kuster, Frank C. Cate, Frank H. Merrill, Walter P. Simonds, T. H. Casey, Charles H. Wood, and Arthur E. Ham.

The menus were printed on Cellusuede Cover, a new paper made by the Mosemary Paper Company, Mosemary, Wis. This paper, made in nine colors, is distributed by the Fort Hill Paper Company, Boston.



Have You Investigated what this Screen can do?

Mill tests have demonstrated that the Valley-Thune Screen has all the desirable screening advantages that the paper industry has been waiting for in a rotary type screen.

The outstanding advantage is the fact that it turns out *clean* pulp consistently—and with a capacity of two or more flat screens.

1. Screens sulphite and sulphate CLEAN.
2. Cylinder only moving part—operates on anti-friction bearings.
3. Practically no maintenance cost.
4. Little power required.
5. Less space than one flat screen.
6. Practically noiseless.
7. Does work of 2 or more flat screens.
8. Tightly closed type.
9. Solid end drum.

If the argument of cost-reduction ever applied to any piece of equipment, it certainly applies to this one, and a request for complete information, addressed to the Valley Iron Works Co., Appleton, Wisconsin, will reveal a new source of income for you.

VALLEY

Equipment for Paper and Pulp Mills

New York Office: 350 Madison Ave.
Western Manufacturing & Sales Division: Smith & Valley Iron Works Co., Portland, Oregon
Canadian Representatives: Pulp & Paper Mill Accessories Ltd., Montreal, Canada.

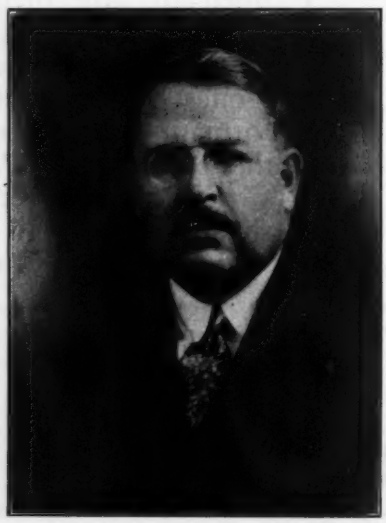
New International Executives

International Paper and Power Company announces the formation of International Paper and Power Securities, Inc., to be of general service to security holders and others interested in the securities of International Paper and Power Company and its affiliated organizations. As a phase of the service of International

W. A. HANWAY

Paper and Power Securities, Inc., it is planned to send out from time to time information regarding the operations and progress of the various affiliated organizations, and other matters affecting the interests of security holders. A. R. Graustein, president of International Paper and Power Company, is president, and W. A. Hanway, formerly of Harris, Forbes & Co., is vice president of the new securities company.

International Paper and Power Company has had a remarkably rapid growth in the electric power field in North America. It today owns hydro-electric power properties with a total capacity installed or under construction of over 1,325,000 h. p., capable of being increased through further development of present plants and the utilization of undeveloped sites to an aggregate of over 2,600,000 h.p. In addition, 477,500 h.p. of steam electric generating capacity is installed in plants of the New England group.



COULTER D. YOUNG

The chief electric power producing and distributing properties of the International Paper and Power system were segragated early this year in International Hydro-Electric System which controls New England Power Association and Canadian Hydro-Electric Corporation, Ltd. The output of these subsidiaries alone is now running at a rate in excess of 3,600,000,000 kilowatt hours per year, the output for the first eight months of this year exceeding the output of the same properties for the corresponding period last year by 37.5 percent.

The election of Coulter D. Young to the office of secretary of the International Paper Company was announced recently. Mr. Young is a member of the New York and Connecticut bars and has had broad experience in corporate legal affairs. After graduating from Yale College and Yale Law School he joined the legal department of the United States Steel Corporation. Later he was connected successively with the law firm of Stetson, Jennings and Russell; with the American Trading Company as resident attorney; and then with Davis, Polk, Wardwell, Gardiner and Reed —successors to Stetson, Jennings and Russell—leaving that firm to join the International Paper Company.

Houston Paper Co. To Build

HOUSTON, Tex., November 23, 1929.—Construction is to begin soon on a new warehouse for the Houston Paper Company in the half-block bounded by Franklin, Commerce and Chartres. streets. It will be on the west side of Chartres and face Franklin.

The contract has been awarded to J. B. Townsend. The building, designed by Joseph Finger, is to be one-story with provision for a second story later. There will be a basement extending under the entire floor area which will be 75 feet on one side and 250 feet in length.

Construction is to be of concrete. The street front will have a California smooth stucco finish.

The building will cost $70,000. It is expected to be ready for occupancy February 1.

The Houston Paper Company has been in business in Houston for 11 years. It is now located at 814 Commerce street.

A greatly increased business made provision for larger quarters necessary, according to Harry Maltz, president. Mr. Maltz believes the new location will be of greater value also from the standpoint of distribution.

Other officers of the company are Mike Maltz, vice president, and I. B. Maltz, secretary-treasurer.

Finnish Paper Market Dull

WASHINGTON, D. C., November 25, 1929.—The Finnish Paper market continues dull according to a cablegram to the Department of Commerce from Commercial Attache Watson at Helsingfors.

The usual improvement in business which sets in after the summer holidays did not take place. In the pulp market conditions are somewhat better. The Finnish mills have disposed of their entire sulphite output for this year and have orders on their books for next year's production. The kraft market has shown no improvement and the market continues weak with unsatisfactory prices ruling. The mechanical groundwood market is slow with prices firm at the level set by the cartel.

Modernization of French Paper Making

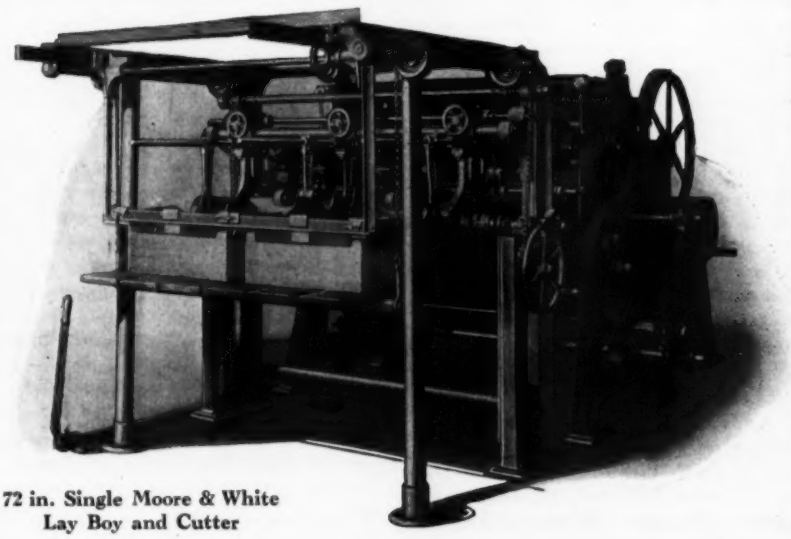
The October number of *L'Industrie Papetiere*, of 10 Rue Aime Berey, Grenoble, France, contains an article covering study of the movement toward modernization of the French manufacture of paper and paper board from 1928 to 1929. This is the result of investigation covering several months. The price of the publication is 10 francs for France and 11 francs for foreign countries.

"M & W" Lay Boys

Over 1000 "M & W" Lay Boys for laying all kinds of paper, are in operation in connection with all makes of Cutters in finishing rooms or on end of paper machines. By the use of a Lay Boy the cutting expense is reduced considerably as these machines will increase the output of any Cutter.

One operator can handle any number of piles and in some cases one operator runs two or more Cutters, as their operation is automatically controlled.

The space required for the Lay Boy is no more than for the table formerly used in connection with Cutters. Wax and Glazed and Curly Papers successfully handled. Lay Boys can be had for Single, Duplex or Diagonal Cutters.



72 in. Single Moore & White Lay Boy and Cutter

. . . ADVANTAGES

Increased Production—Operates Automatically—Paper Piled Straighter—Saves Labor and Finished Paper—Can be attached to any make of Cutter—Present Trucks can be utilized.

Makes the use of Wide Cutters desirable at High Speed operation—A Trial will convince you—Trial orders accepted—Literature upon request.

THE MOORE & WHITE CO., NORTH PHILA. STATION PHILADELPHIA, PA.

PAPER · MACHINE · BUILDERS

CONSTRUCTION NEWS

A Summary of Vital Facts Regarding Construction, Finances and Operation of Paper Mills

Construction News

Kalamazoo, Mich.—The Paper Products Manufacturing Company, Michigan avenue, manufacturer of pads, tablets, etc., is completing plans for the construction of a new plant unit at Michigan avenue and Water street, to be three-story and basement, reported to cost about $130,000, with equipment. It is expected to begin superstructure at an early date. Bosler & DeLoff, 230 East Kalamazoo avenue, are engineers, and it is understood will handle general contract. H. Schrier is president.

Childs, Md.—The Marley Paper Manufacturing Company, Marley Mills, Childs, near Baltimore, closed down a few weeks ago through financial difficulties, is said to be scheduled for early resumption of activities under the direction of a committee of creditors. The plant has been giving employment to about 75 operatives, and is devoted to the manufacture of wrapping papers. It is stated that the committee in charge will arrange financing to provide funds for operation on full production basis.

Salem, Ore.—The Western Products Company, Salem, is having plans completed by L. A. DeGuere, Wisconsin Rapids, Wis., engineer, for proposed local mill for the manufacture of paper board products, and it is expected to proceed with the project at an early date. The initial unit will be equipped for a capacity of about 8 tons, and will be supplemented with another unit of practically like size. The project is reported to cost more than $300,000, with equipment.

Philadelphia, Pa.—In connection with the recently announced building unit of the Keystone Index Card Company, 3223 Race street, manufacturer of commercial card stocks, etc., it is said that plans are in progress for a new two-story manufacturing plant on adjoining site at 213 North 33rd street, estimated to cost about $42,000, with equipment. The other building will be erected at 217 North 33rd street, and will be used for show room and office service, estimated to cost close to $17,000. J. D. Laverall is president, in charge.

New York, N. Y.—The R. M. L. Corporation, recently organized by Morris Lesenger, 34 35th street, Brooklyn, and associates, with capital of 200 shares of stock, no par value, is said to be planning early operation of a local plant for the manufacture of corrugated boxes and containers. Extensive capacity is planned.

Newark, N. J.—The Mono Service Company, Verona avenue and Oraton street, manufacturer of paper cups and containers, is carrying out an expansion and improvement program at its plant for large increase in present capacity. A new building is being erected on adjoining site, to be five-story and basement, 113 x 160 feet, steel and reinforced concrete, estimated to cost about $400,000. The Shore Construction Company, 94 Christie street, Newark, is general contractor. Machinery installation in the new plant, with alterations in present factory is expected to bring the investment to about $1,000,000. William Clifford, 1177 East Grand street, Elizabeth, N. J., is architect.

Springfield, Mass.—The Fiberloid Corporation, Worcester street, has filed plans for proposed new one-story and basement addition, 32 x 54 feet, at fiber mill, reported to cost about $25,000. It will be used for office and general operating service. Max H. Westhoff, 293 Bridge street, Springfield, is architect.

Detroit, Mich.—A. Backus, Jr. & Sons, 1533 West Lafayette street, manufacturer of corrugated and other containers, boxes, etc., has approved plans for a new addition to plant on West Fort street, to be one-story, reported to cost about $25,000, with equipment. General contract has been awarded to the Austin Company, General Motors Building, Detroit.

Fredericksburg, Va.—The Fredericksburg Industrial Corporation, formerly the Sylvania Industrial Corporation, is awarding all miscellaneous contracts for the completion of first unit of new local mill, to be used for the production of transparent wrapping papers under a special process. It is understood that the plant is scheduled for completion early in the spring. Awards have been made for steel sash to the Truscon Steel Company, Youngstown, Ohio; hollow tile to Cox-Janeway Company, Philadelphia, Pa.; and iron work to the Creswell Iron Works, Inc., Philadelphia. The mill will represent an investment of about $1,000,000, with machinery. Dr. F. H. Reichel is general manager.

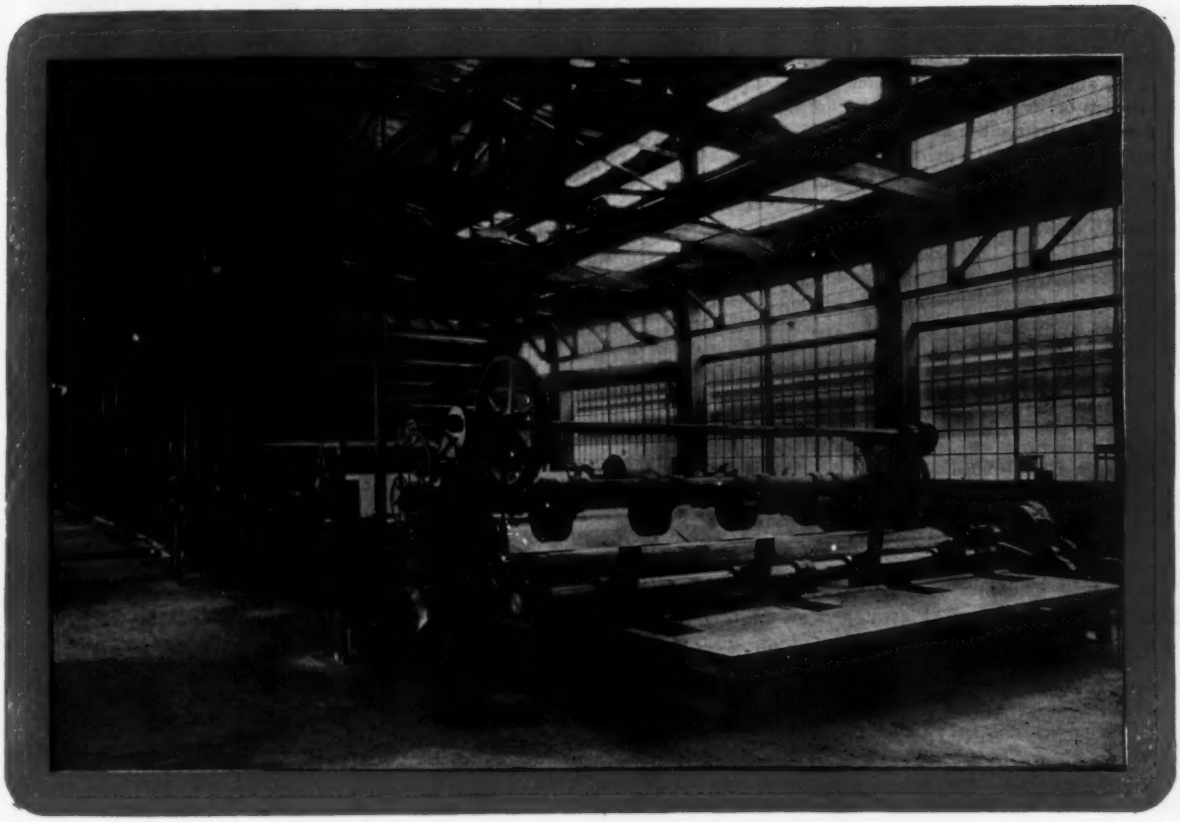
Oshkosh, Wis.—The Oshkosh Corrugated Box Company, Harrison and Murdock streets, is said to be planning early call for bids for proposed new plant on local site, previously referred to in these columns, to be two-story, reinforced concrete, estimated to cost more than $150,000, with equipment. E. J. Juul, Security Bank Building, Sheboygan, Wis., is architect, in charge.

Chicago, Ill.—The Fibre Products Manufacturing Corporation, 608 South Dearborn street, recently organized, is said to be planning early operation of local plant for the production of fiber specialties of various kinds. The new company is headed by E. B. Patterson and V. C. Rollins.

International Falls, Minn.—The Insulite Company, International Falls, manufacturer of insulating board products, is said to have plans maturing for an expansion and improvement program at local mill for extensive increase in present output. The company is a subsidiary of the Minnesota and Ontario Paper Company, same address.

Savannah, Ga.—The Southern Building Products Corporation, recently organized as a subsidiary of the Certain-teed Products Corporation, 100 East 42nd street, New York, manufacturer of roofing papers, wall board specialties, has work under way on its proposed new mill at Savannah for trade in the southern district, and proposes to have the initial unit ready for service early in coming year. Entire project is reported to cost more than $1,000,000 with equipment. W. G. Will is company engineer at site.

Holyoke, Mass.—The National Blank Book Company, Riverside, Holyoke, has superstructure under way on new plant unit to provide for large increase in present output, for which general contract recently was let to the Casper Ranger Construction Company, 20 Bond street, Holyoke. Miscellaneous contracts for com-



New 202" Bond Machine From Dry End
Grays Harbor Pulp & Paper Co., Hoquiam, Wash.

FASTEST *on bond* . . . 1000 feet per minute

Every detail of this huge machine contributes to speedy, high capacity paper production. Head box and slice feed stock uniformly and steadily to the wire. Every roll is Timken anti-friction bearing equipped. Dryers are perfectly balanced, absolutely uniform in wall thickness and trued to micrometer exactness. Gears are of reduced diameter, with specially generated teeth to give full rolling contact and are practically noiseless even at top speed. Open aisles on both sides facilitate broke removal. Ingenious devices reduce starting torque, conserving power and speeding up operation. Typical Bagley & Sewall attention to minute details make this massive bond machine supremely practical.

The Bagley & Sewall Co.

Watertown, N.Y.

pletion are being awarded. The expansion is estimated to cost close to $75,000, with equipment.

New Westminster, B. C.—The Westminster Paper Company, Ltd., has authorized the construction of new mill units to replace the portion of its plant destroyed by fire last July, and will proceed with superstructure at an early date. Plans are being completed for a three-story finishing mill, 100 x 160 feet, and two-story machine room, 100 x 230 feet, with wharf 60 feet wide and 260 feet long. The immediate work is reported to cost about $1,000,000, with mechinery, and later structures will cost close to a like sum. J. J. Herb is president.

Riverbend, Que.—Price Brothers & Co., Ltd., Quebec, Que., have started up another machine at its local news print mill, providing for an increase to 400 tons per day from this plant. There are now four machines in service, each with a daily rating of 100 tons or better, and it is proposed to continue production on this basis for some time to come. The unit just placed in operation is the second new machine to be set up by the company at the Riverbend mill this year.

Montreal, Que.—The Canadian Paperboard Company, 2 Seigneurs street, Montreal, will proceed with the erection of a new one-story addition to its mill, for which general contract recently was let to the Stevens Engineering Company, 25 St. Patrick street, Toronto, Ont. It will be 108 x 160 feet, and will be equipped for large increase in present output. Unit is expected to cost about $100,000, with machinery. Present mill of the company is running on a capacity schedule.

New Companies, Etc.

New York, N. Y.—The Morrisania Paper and Bag Company has been incorporated with a capital of $10,000, to manufacture and deal in paper bags and containers. The company is represented by Sobel & Brand, 2 Lafayette street, New York.

Wilmington, Del.—The Pacific States Pulp and Paper Company has been incorporated under Delaware laws with capital of $3,000,000, to construct and operate a pulp and paper mill on the Pacific Coast. It is understood that company will become active at an early date. The incorporators are N. P. Charles, Priest River, Idaho; L. E. Van Winkle, Spokane, Wash.; and A. T. Peterson, Spokane.

New York, N. Y.—The Empire Corrugated Container Corporation, 360 Furman street, Brooklyn, has filed notice of increase in capital from $100,000 to $150,000, for general expansion.

Bedford Pulp & Paper Co. Completes Dam

In completion of the dam which has been in process of erection in the millway adjoining the paper making plant of the Bedford Pulp and Paper Company on Big Island, Va., the mill is now supplying its own power generation for the operation of the paper making equipment. In conjunction with the new power sources there has been erected in the plant a 5,000 KW. General Electric steam turbine, double extraction, which permits of extracting at 150 pounds gauge and 20 gauge. By this method the remainder of the steam is diverted to the condenser. There is also being installed a switchboard and five 1,000 h.p. synchronous General Electric motors supplied through the Philadelphia branch of the General Electric Company.

Leading Forester and Land Surveyors Combine

An announcement of mutual co-operation between two highly reputable Canadian and American concerns has been made. James W. Sewall, consulting forester, of Old Town, Maine, who has built up one of the largest timber cruising and forestry businesses in the country, and Phillips & Benner, Ontario and Dominion land surveyors, of Port Arthur, Ont., one of the oldest and best known firms in Canada, are the parties thereto.

This combining of interests will give clients of both concerns a close touch with the complete forest and logging engineering service offered. As no increase in overhead is proposed, the benefits of this co-operation will largely accrue to clients.

Canadian Hydro-Electric Output Record

Canadian Hydro-Electric Corporation, Ltd.—controlled by International Hydro-Electric System, a division of International Paper and Power Company—produced 208,661,000 kw. hours of electric energy in October, a new high record for a single month. This output is 39 per cent over the output of the corporation in October of last year and 20 per cent over the previous high monthly record made in September.

In the first ten months of this year the plants of the corporation generated 1,687,265,000 kw. hours, 30 per cent over the output of the corporation in the full year 1928, and 72 per cent greater than that in the first ten months of last year. The output of the corporation in the twelve months ended October 31 was 2,002,406,000 kw. hours, an increase of 75 per cent over the output of the corporation in the twelve months ended October 31, 1928.

Based on the latest figures for output of electric energy in the Maritime Provinces—those for the first nine months of this year—the output of the Grand Falls, N. B., hydro-electric plant of the corporation was 32 per cent of the total output of electric energy of all the hydro-electric plants in the Maritime Provinces in that period. The Grand Falls station is the largest hydro-electric plant in the Maritime Provinces and is operated by Saint John River Power Company, controlled by Canadian Hydro-Electric Corporation, Ltd.

Speeding Up Corinth Mill

[FROM OUR REGULAR CORRESPONDENT]

CORINTH, N. Y., November 25, 1929.—It is reported thet the local plant of the International Paper Company will begin to operate thirteen hours each Sunday, beginning next week, in order to meet requirements for news print orders. Under the new schedules it is undrstood that only five news print machines will be affected. Employment here is at its peak and the paper company alone is employing in the neighborhood of 900 men. Skilled workers are constantly being sought and there are few idle hands. The force in the construction department has been enlarged to ninety hands, which is about double the former number and large increases in the other section have also been made. The influx of many new families to this section in the past few months has affected the housing situation with the result that tenement space is at a premium.

Paper Converting Machine Co. Expands

The capacity of the plant of the Paper Converting Machine Company, Inc., designers and builders of special machinery, of 601 Harvey street, Green Bay, Wis., has been more than doubled recently and is operating on full schedule.

The Paper Converting Machine Company designs and builds

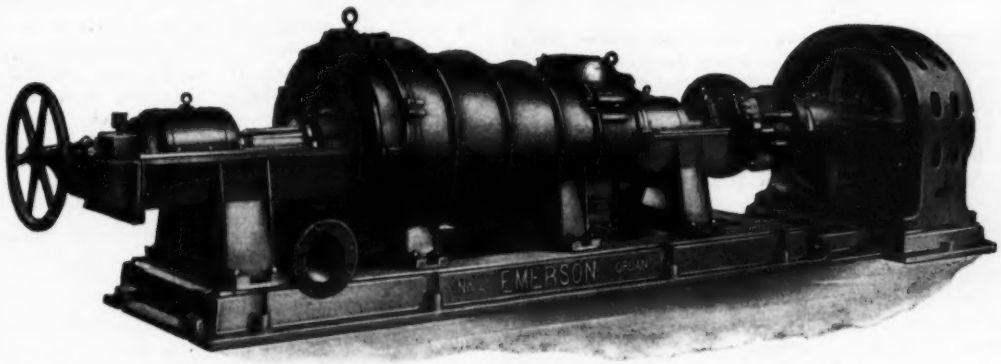
rotary folding machines for napkins, towels, and toilet, together with embossing and printing attachments; air operated bundling presses, creping machines and other special machines for paper converting.

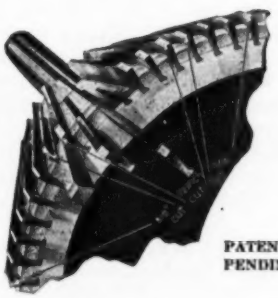
The company's officers are B. L. Walter, president; J. J. Christman, vice president; F. W. Christman, secretary; and P. J. Christman, treasurer and general manager.

The EMERSON JORDAN

equipped with the

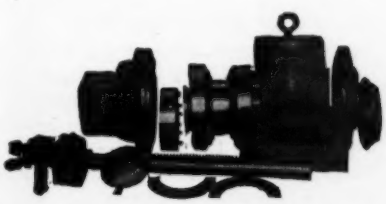
Bolton INVERTED WEDGE Plug





PATENTS PENDING

Showing construction of the Bolton Inverted Wedge Plug. Knives and woods cannot come out. Note Inverted Wedges.



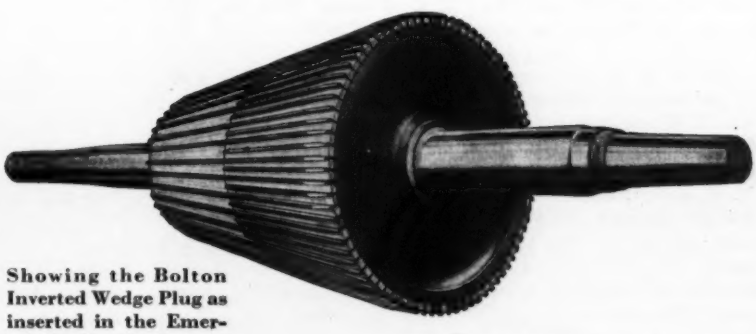
Detail of Timken end bearing which takes care of both radial and thrust.

Now every Emerson Jordan offers you the tremendous advantages of the Bolton INVERTED WEDGE Plug and Timken Roller Bearings.

These two great features put the Emerson Jordan in a class by itself for unit control, lasting satisfaction and true economy. No other Jordan has these great construction advantages.

Make sure of all the benefits and savings that result from these two wonderful improvements in Jordan engineering. Standardize on Emerson Jordans.

Write for full information and estimates



Showing the Bolton Inverted Wedge Plug as inserted in the Emerson Jordan above.

The EMERSON MANUFACTURING COMPANY

LAWRENCE ∞ ∞ ∞ MASSACHUSETTS

DIVISION OF JOHN W. BOLTON & SONS, Inc.

3493

New York Trade Jottings

Herbert L. Thwaite, secretary of the Tissue Paper Manufacturers' Association, is now visiting a number of mills in New York State and Massachusetts.

* * *

Ralph T. Davis, secretary of the National Sulphite Paper Manufacturers' Association, was in town for the meeting of the association at the Hotel Belmont last week.

* * *

Oliver M. Porter, manager of the National Kraft Paper Manufacturers' Association has returned from a trip to Boston. A meeting of this association was held last week in New York.

* * *

The Centrifugal Engineering and Patents Corporation, whose office was formerly at 15 Exchange Place, Jersey City, N. J., have moved their offices to the Chanin Building, 122 East 42nd St., New York.

* * *

Spencer J. Blake, formerly New York manager for W. C. Hamilton & Sons, is now associated with R. G. Benedict, eastern representative of the Beveridge Paper Company, Indianapolis, Ind., at 299 Broadway, New York.

* * *

The Baxter-Lane Paper Corporation, New York, distributor of Gator-Hide Mulch paper, manufactured by the International Paper Company, has appointed W. L. Tracy, Inc., New York advertising agency, to direct its advertising account.

* * *

Alfred Bunge, paper mill supply specialist, has moved from 500 Fifth avenue, to Room 938, the Aeolian Building, 33 West 42nd street, New York, but is retaining the same telephone numbers, namely, Pennsylvania 4880, and Longacre 7094.

* * *

The Jessup & Moore Paper Company, of Philadelphia, have leased executive offices on the 29th floor of the 53-story Lincoln Building, nearing completion at 60 East 42nd street, facing Grand Central Terminal. This concern is the second paper company to lease in this building, W. F. Etherington & Co. having leased large space on the 38th floor.

* * *

The weekly meeting of the New York Division of the Salesmen's Association of the Paper Industry was held at the Fraternities Clubs Building, at 22 East 38th street, New York, and a talk by Charles H. Barr received interested attention. The members were heartily in accord with the views expressed by Mr. Barr in his description of a consumer magazine stressing the importance of good paper, from the point of view of the printing and paper foundation.

* * *

One of the largest purchases of the year was recently made by Jack Galewitz, president of the Great Atlantic Paper Company, Inc., 77 Wooster street, New York. This purchase, consisting of 65 cars of paper, was made from the leading mills in the East and Midwest, and was made up of English Finish, Super, Offset, M. F. Book, Antique, White and Colored Bond, Index, Manilas, Sulphite, Ledgers, and White and Colored News Print Paper, in rolls and sheets. This paper will be taken into their stock and converted in their plant where they have just installed additional sheeters and rewinders, bringing up their daily capacity to thirty tons. This paper is to be distributed to the jobbing trade.

* * *

The following representatives of the paper industry were delegates to the Conference on the Census of Manufacturers and Distribution held at the Hotel Pennsylvania, New York, Friday, November 22: William E. Ebbets, Coy-Disbrow & Co.; J. W. Guimby, Allied Paper Mills; Harold R. Hopkins, Oxford Paper Company; Arthur Schroeder, Pejepscot Paper Company; J. L. Stille, Continental Paper and Bag Company; D. H. Newell, International Paper Company; S. C. Knode, Albemarle Paper Manufacturing Company; T. A. Hendry, Mead Sales Company; R. G. Macdonald, Secretary TAPPI; J. A. C. Kavanagh, American Paper and Pulp Association, and D. A. Crocker, Salesmen's Association of the Paper Industry.

* * *

In keeping with the progressive spirit shown by the houses distributing the Hubbs Lines, a special representative will be retained, beginning January 1, to take carge of the advertising and sales promotion activities of Charles F. Hubbs & Company, paper merchants, New York; Hubbs & Howe Company, Buffalo, N. Y.; Hubbs & Corning Company, Baltimore, Md., Hubbs & Hastings Paper Company, Rochester, N. Y.; Charles F. Hubbs & Company, Troy, N. Y.; Hubbs & Howe Company, Cleveland, Ohio; Interstate Cordage and Paper Company, Pittsburgh, Pa. H. A. Vandyck, well known in the wall paper industry, lately associated with the Wall Paper Manufacturers Association of the United States and editor of the *Wallpaper Magazine*, has been selected for this work.

Thirty Years the Limit of Canada's Forests

The Federal Department of the Interior has confirmed the estimate by Sir George Courthope in the British House of Commons that Canada's forest resources, at the present rate of depletion, will not last more than 30 years.

Canada's major problem, the department declared, was the introduction of more conservative methods of handling forest lands rather than reforestation. Facing this situation, the Dominion and Provincial Governments are co-operating in a scheme for an inventory of forest resources as the prime step before evolving a proper policy to cope with the problem. Forestry officials of the Ottawa Government are making an inventory of Dominion lands and conducting a study of the rate of timber growth in various parts of the country through the research division of the Department of the Interior. At the same time, Dominion officials here are acting as a central agency in the compilation of returns from the different provinces based on the surveys provincial officials are making of the forest resources in their particular domain. A meeting of representatives of the Dominion and Provincial Governments, to consider the question of timber conservation in the light of these surveys, is expected to be held some time next summer.

The work of reforestation is not being disregarded. In districts where lands have been entirely denuded, reforestation is being carried on.

An educational campaign to save and extend the life of the country's timber supply is also being conducted, the department stated, and a general improvement in this direction has been noted

Ground Broken for New Paper Mill

BUCKSPORT, Me., November 25, 1929.—Ground was broken here today for a news print paper mill with a daily capacity of 270 tons to be constructed at an estimated cost of $10,000,000 by the Maine Seaboard Paper Company. The company will be headed by Walter S. Wyman, president of the Central Maine Power Company and the New England Public Service Company and will be financed by interests affiliated with those companies.

The mill will be constructed on the site of the old Blodgett Tannery and, fronting on Tidewater, will be able to receive raw material and ship its finished product by steamers up to 10,000 tons capacity.

Four hundred thousand acres of timber and to supply pulpwood for the plant are already purchased or under option in Eastern Maine. Construction on tidewater will permit the company to draw upon vessel shipments from sources all over the world.

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Centrifugally Cast BRONZE

Have your rolls covered with a genuine centrifugally cast bronze sleeve made by the Shenango-Penn exclusive process.

This centrifugal casting process assures a dense, uniform, close-grained surface that is far superior in every way to ordinary sand cast bronze for paper and engraving rolls.

Write for quotations.

Shenango-Penn Mold Company

Oliver Building Pittsburgh, Penna.

Works at Dover, Ohio and Sharpsville, Pa.

Power Plant Section

Reducing Power Costs Through Unit Treatment

Conducted by Reginald Trautschold, Consulting Engineer

Flow Meters Instrumental in Profit Taking

Knowledge Cheaply Gained Yields Handsome Returns

In the conduct of almost any pulp and paper mill, an increase in profit taking of about 20 per cent is attainable at the present time by effecting a reduction of from 12 to 13 per cent in the cost of power. It makes really very little difference whether the mill is large or small, well managed or not, the mill equipment modern or old fashioned, business good or bad, competition keen or the market spotty, the relationship holds fairly constant. A 12 to 13 per cent cut in power costs creates a very substantial margin available for dividends or re-investment in the business. This margin, furthermore, is of a distinctly stable character, in that it is independent of what are popularly termed business conditions and is virtually free from any risk whatever.

Cost of Power

By the cost of power is meant, of course, the cost of the steam employed in process operations as well as that of the steam utilized in the operations of turbines and steam engines; in short, the output of the boiler plant. A plentiful supply of steam is essential in paper making, for power purposes and in even greater quantity for process requirements. This, very naturally, is generally appreciated, so for the aforementioned profit taking to be possible, it is, doubtless, the intrinsic value of the steam which is not so well understood. The true worth of an essential, particularly of an essential necessarily employed in large quantities, is, in fact, rarely appreciated.

Power costs, a concise and dependable valuation of the intrinsic value of steam in paper making activities, represent today a monetary outlay considerably in excess of any margin of profit in mill operation reasonably attainable under existing trade conditions, about a third greater ordinarily, and substantially more than double the expenditures for all chemicals needed in pulp and paper production. Another illuminating comparative measure is that it is fully half as great as the labor burden. Valued accordingly, the worth of steam for power and process operations in the paper making industries can be better appreciated, perhaps, than by the much more usual manner of looking upon the steam supply simply as an essential produced in large quantities at comparatively little expense, once the investment in a suitable boiler plant has been made.

Not only does steam cost more today than the profits accruing to modern paper making activities, and in the up-to-date mill steam has never been more efficiently produced and at such low unit cost, but the power costs of a mill offer probably the greatest opportunities of effecting cost reductions without entailing heavy capital investment. Such improvements, furthermore, are comparatively easily consummated once their marked effects upon profit taking are properly appreciated.

The first requisite for reducing power costs is then, obviously, the acquisition of knowledge concerning what becomes of the full steam supply when it leaves the boiler battery and of what it accomplishes in the way of useful work before it condenses. Steam is altogether too costly a power medium and far too unstable to lose track of. Under constant supervision, only, can it be so directed and controlled that power costs are kept at a minimum. And, a 10 per cent reduction in such costs means a 16 per cent increase in mill profits.

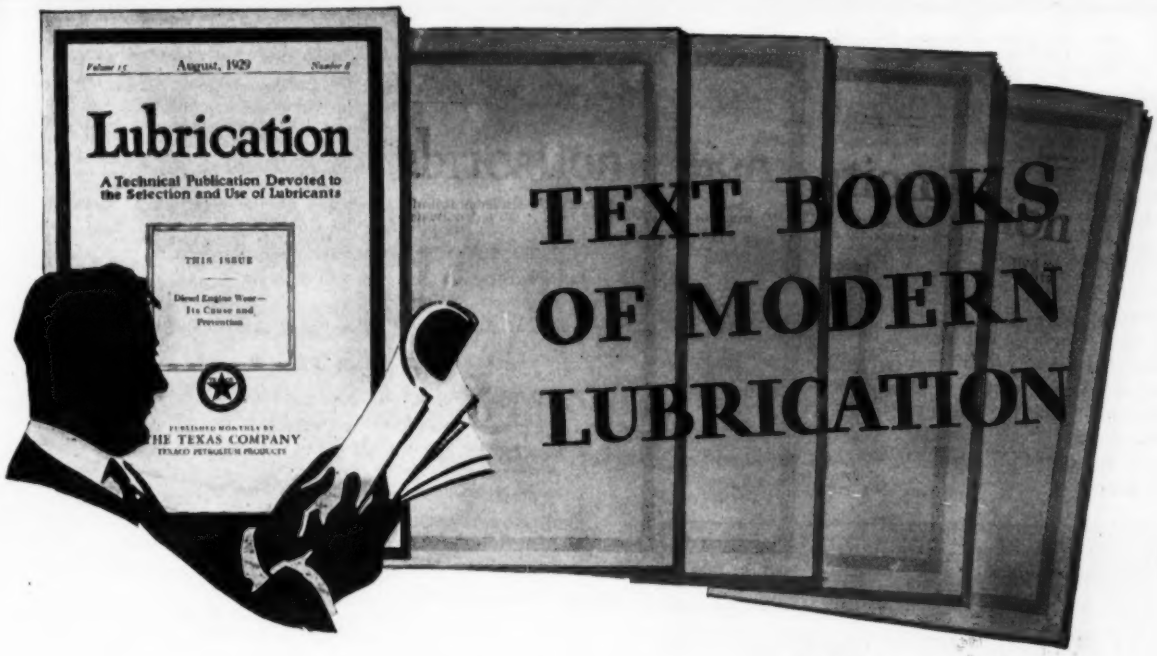
The steam should be generated as efficiently and economically as possible, without question, but this is actually rarely of chief concern. The existing boiler plant represents an investment of considerable amount and, while in almost every case a more efficient boiler plant might be installed and one which would generate steam at a lower unit rate so far as operating expenses are concerned, there are countless reasons why a mill may well hesitate before scrapping its existing steam generating equipment in favor of a more modern and efficient boiler plant. A major capital investment is entailed, in the first place, imposing financing undertakings which, despite the attractiveness of fairly anticipated reductions in operating costs, existing business conditions, private and general, may not justify.

As a rule, unless the power costs are actually prohibitively high, it is wiser to make sure that the lowest feasible power costs are being attained with the existing boiler plant before assuming the responsibilities entailed in re-financing for new heavy capital investment. In almost every instance, it will be found that unless conditions are really critical, opportunities abound for profit taking which have been overlooked in the past and which can still be taken advantage of without contracting any heavy expenditures.

Profit Taking May Be Effected

After acquiring the essential information and instigating the relatively minor changes and advisable improvements almost certain to have brought to the fore with the acquisition of the knowledge, a certain profit taking can usually be effected without a stretch of the financial budget, whether more comprehensive plans are warranted or not. Even though later developments may make it advisable to assume an extensive modernizing or rebuilding program at a comparatively early date, much has been gained during a critical period, some money made and certain wastes arrested.

To learn what becomes of the full steam supply when it leaves the boilers and what it productively accomplishes before it condenses necessitates the employment of modern measuring and recording instruments, for only by such means can the behavior of the confined steam be dependably ascertained. Pressure, temperature and flow, or velocity, instruments, all, have to be used, but the present discussion can well be confined largely to a consideration of flow meters as important units in pointing the way to effecting the power costs reductions which are so influential in profit taking. Of course, both pressure and temperature instruments are also highly important when it comes to cutting power costs, particularly such units incorporated in automatic combustion


Volume 15 August, 1929 Number 8
Lubrication
A Technical Publication Devoted to the Selection and Use of Lubricants
THIS ISSUE
Diesel Engine Wear—Its Cause and Prevention
PUBLISHED MONTHLY BY
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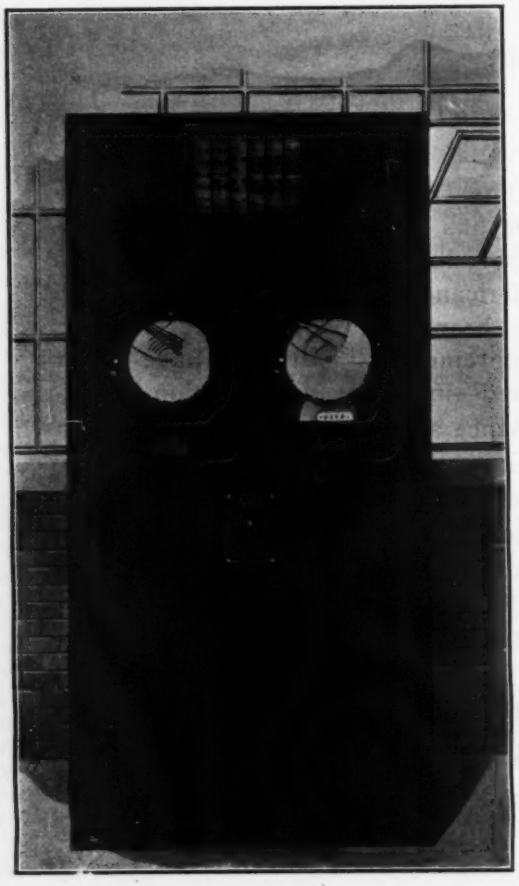
control systems, but these can well be reserved for consideration from such aspect in forthcoming discussions.

Flow Meter Functions

It may be quite properly assumed, however, that the mill boiler plant today is fairly well provided with pressure and temperature instruments and that the steam supply entering the main distributing header is held reasonably constant in respect to quality and characteristics believed to be well suited for the services the steam has subsequently to discharge. Such situation being quite general, probably the best way of drawing attention to the numerous functions of flow meters in bringing to light the steam supply conditions at critical stages of its passage through power plant and mill is, first, to describe briefly the flow meter complement and arrangement of one of the new mills representing advanced practice in this respect and, second, to consider in just what ways such instruments have been instrumental in bringing about power cost reductions in a few typical mills where flow meters have been effective in profit taking for a number of years. The advanced practice should serve to indicate the concensus of expert opinion in regard to the proper functions of flow meters, while the earlier records should go far toward demonstrating the reasons for such agreement on the part of mill engineers and progressive mill managements.



Courtesy: Bailey Meter Co.

FIG. 1

Individual boiler meters check flow meter findings, Jno. H. Heald Paper Co.

The flow meter installation at the new plant of the John H. Heald Paper Company, Lynchburg, Va., which has only recently been placed in full operation, is an excellent example of advanced practice, the plant being an outstanding illustration of sound engineering, not only in respect to flow meter equipment but for a highly efficient automatic combustion control system as well. The latter incorporates some interesting applications of temperature, pressure and boiler meter instruments as control factors, the last mentioned being a compound unit, indicating, recording and integrating steam flow and in addition recording air flow and steam temperature, but this will be taken up later.

The flow meters proper are of the electrically operated type, recording and integrating the steam flow at thirteen strategic stages in the passage of the steam and the water flow in two other essential operations. The recording dials of all fifteen meters are mounted on a common panel centrally located in the turbine room, where at a glance the following information may be noted:

Steam Flow Records

High pressure steam (275 lbs. per sq. in and 100 deg. F. superheat) in main header,
High pressure steam make-up to extract plant,
High pressure steam to digester,
Live steam to paper machines,
High pressure steam to 4,375 k.v.a. turbine-generator,
High pressure steam to 625 k.v.a. turbine-generator,
Exhaust steam (20 lbs. per sq. in., dry and saturated) from large turbine-generator,
Exhaust steam (20 lbs. per sq. in. and 10 deg. F. superheat from small turbine-generator,
Low pressure steam to feed water heaters,
Exhaust steam (10 deg. superheat) make-up to extract plant (2 meters),
Low pressure steam to machine driers,
Low pressure steam to machine room header;

Water Flow Records

Feed water pump supply (water at 215 deg. F.),
Clear water supply to plant (water at 70 deg. F.).

It is interesting to note that the readings furnished by these numerous flow meters check remarkably closely with the individual boiler meters which record and integrate the amount of steam generated by each of the three large water tube boilers fired on pulverized coal which serve the mill. Recent readings of these meters shows that they are checking one another with a maximum variation of less than 2 per cent and in some cases, less than 1 per cent.

Information Supplied by Instruments

Information such as is supplied by these instruments, obviously, clearly indicates what becomes of the full steam supply when it leaves the boilers and what it productively accomplishes before it condenses. How such information leads to and is, in fact, essential for the reductions in power costs which are so effective in stimulating profit taking is shown better, however, by the records of older installations, where sufficient time has elapsed to put into practice the refinements of operation deduced from the recorded findings of the flow meters.

Flow Meters Instrumental in Large Fuel Saving

The experience of the Flambeau Paper Company, Park Falls, Wis., is a particular apt example of the influence of flow meters in profit taking, for eighteen such instruments were installed in September, 1921, at a time of general and quite marked business depression, for the specific purpose of effecting a reduction in steam costs in the face of mounting expenses for fuel and materials. In this instance, the meters were not only instrumental in effecting a yearly saving in fuel of about $6,000.00, but saved quite a heavy capital investment at an inauspicious time.

These flow meters, also of the electrically operated type with

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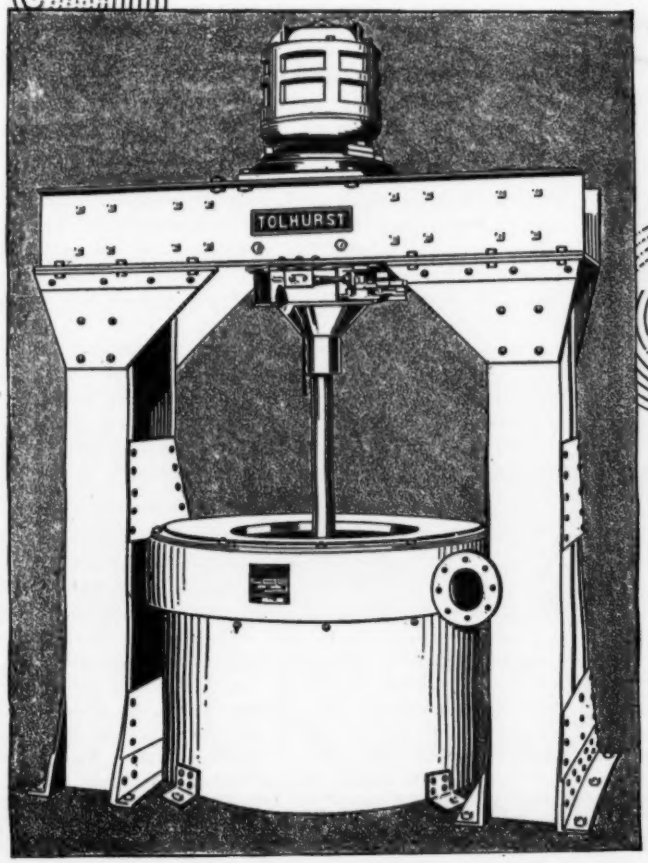
MILLS that depend upon old methods of stuff cleaning cannot hope to attain standards of cleanliness and strength achieved through the use of the centrifugal. Nearly clean paper can only be contrasted with the thoroughly clean paper that Centrifugal stuff purification makes possible.

The Tolhurst, using a force hundreds of times that employed in the sandtrap, eliminates both heavy and light impurities (grit, metal, cork, wax, etc., etc.). The fibre bundles are thoroughly broken up without shortening the fibre, a definite brushing out action takes place, with the result that the sheet has a better formation with higher pop and tear tests.

For the complete story of the Tolhurst, write for Bulletin today.



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TROY, N. Y.

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DESIGNED AND BUILT BY SPECIALISTS

This machine is made under license of the Centrifugal Engineering and Patents Corporation, holders of the Erkenator Patents.

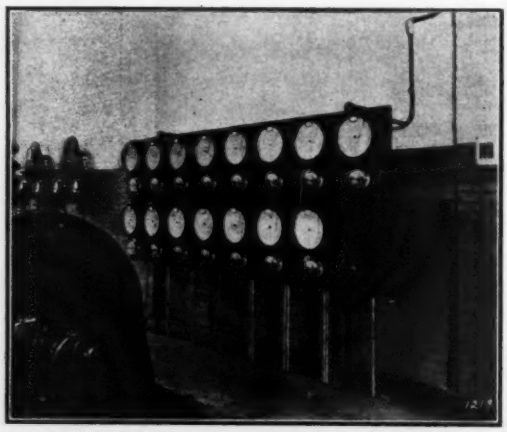
their recording and integrating dials mounted on a common panel under the eye of the chief engineer, were located as follows:

7 on individual 250-horsepower boilers,
2 on individual 145-horsepower, constant speed, Corliss engines,
2 on individual 175-horsepower, variable speed, Corliss engines,
1 on a 1,250-kilowatt steam turbine,
1 on an exhauster steam turbine,
2 on steam lines to digesters,
1 on steam line to pulp beaters,
1 on steam line to driers,
1 on water line to acid plant.

This wide distribution of the meters supplied pretty intimate information concerning the behavior of the steam supply throughout the plant and almost immediately after installing the meters one of the high mill officials reports that dividends commenced to be drawn on the investment.

The meters recorded not only the steam supplied the various machines throughout the mill, but provided the information needed for an accurate determination of the cost of generating the steam and the exact cost of the steam used by the various mill units. Careful investigation of these itemized records made it a relatively simple matter to correct certain wasteful practices, previously unappreciated, and effect numerous economies in operation.

The major saving was somewhat unusual, in that it was by the information furnished by the flow meters that the disturbing question of high fuel cost was disposed of, the determination of the best mixture of "hog feed" and coal to employ for most economical generation of steam. Hog feed is composed of wood chips, accumulating as a by-product of operating the saw mills, and large supplies of such fuel happened to be available to the Flambeau Paper Company. The more of this refuse that can be burned with more expensive coal employed by the mill, naturally, the lower is the mill's cost for generating steam and the best mixture, one containing considerably more "hog feed" than previously used, was readily determined with the aid of the flow meter charts. This one economy alone is said to have effected a saving of about



Courtesy: ***Bailey Meter Co.***

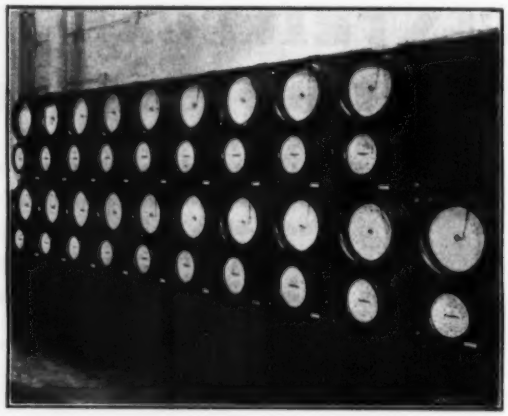
FIG. 2

Flow meter panel at Jno. H. Heald Paper Co.'s new plant at Lynchburg, Va.

$6,000.00 in the fuel burden, one of the chief items in the cost of power.

The flow meters serving the digesters, with their heavy demands for steam, also proved highly valuable units. In an effort to reduce the cost of digester operation, a great deal of time and money had been expended, but until the flow meters were placed on the digesters it was not known just what modifications and adjustments effected the best results. Incidentally, a practice was inaugurated of signalling the boiler room when a digester was about to be thrown on the load and the flow meter indicators on the various boilers enabled provisions to be taken to meet the sudden and heavy loads effectively and so insure the best operation of the digesters.

In another way in which the flow meters proved highly helpful, in avoiding a heavy capital investment at first deemed necessary, the conditions were quite unusual, but the experience well demonstrates the importance of flow meter determinations in power cost



Courtesy: Republic Flow Meters Co.

FIG. 3

Master flow meter panel (19 instruments) guarding steam and water at Champion Fibre Co.

reductions. In this instance, the power plant of the mill supplied electric energy to the town and the constantly increasing demand for current made it necessary to drive the 1,250-kilowatt turbine-generator employed continuously, frequently at high overload. So difficult became the task of supplying sufficient steam to meet these heavy demands, in fact, that it had been virtually decided to invest in another 300-horsepower boiler, simply for the town service. The flow meters showed, however, that with a proper distribution of the demand among the existing boilers there was really no very great shortage in boiler capacity and that with the assistance of the output of an available 240-kilowatt hydro-electric generator all power demands could be satisfied, at least temporarily. The information furnished by the flow meters serving the mill boilers actually circumvented the purchase of an expensive boiler unit at a time when business conditions absolutely tabooed any avoidable investment.

The total cost of operating all eighteen flow meters, amortizing the entire investment entailed in twenty years and making ample allowances for depreciation, repairs and necessary attendance, is a matter of $2.70 a day, 15 cents per meter. This is certainly a negligible item in view of the substantial economies in plant operation the use of the flow meters has brought about.

Exhaust Steam Saves $6,000 Annually

Another of the more prominent mills to have found flow meters extremely instrumental in profit taking is that of the Marathon Paper Company at Rothschild, Wis., where such instruments have been in use since 1919, when eleven of these indicating, recording and integrating instruments were installed. Now there are quite a number more, all in constant service, literally regulating and directing the operation of the mill. An indication of the high value placed on these meters is evidenced by the statement made by the master mechanic of the mill to the effect that the power plant would not operate without the flow meters (sixteen were in use at that time), for the reason that the firemen would quit, their work being held to be doubled without the aid of the flow meters in

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THIS plan is the result of the exceptional savings made by the Penberthy Paper Drier Equipment upon a large number of machines making paper of all kinds.

The procedure is to employ an independent engineering organization to make a survey of your present operating costs and conditions. You will then receive a proposal including a conservative guarantee of the savings that will be made by the installation of the Penberthy Equipment.

After the Penberthy Paper Drier Equipment is in service, another survey is made to determine the decreased steam consumption, increased production, improved quality, etc. No payments are made until these savings are evaluated by a method that has your approval.

Your engineers will supervise the surveys which will cost you nothing. Neither will the initial survey obligate you to use the Penberthy Equipment.

This plan is irrespective of your present drying system. The Penberthy Equipment usually pays for itself in less than a year.

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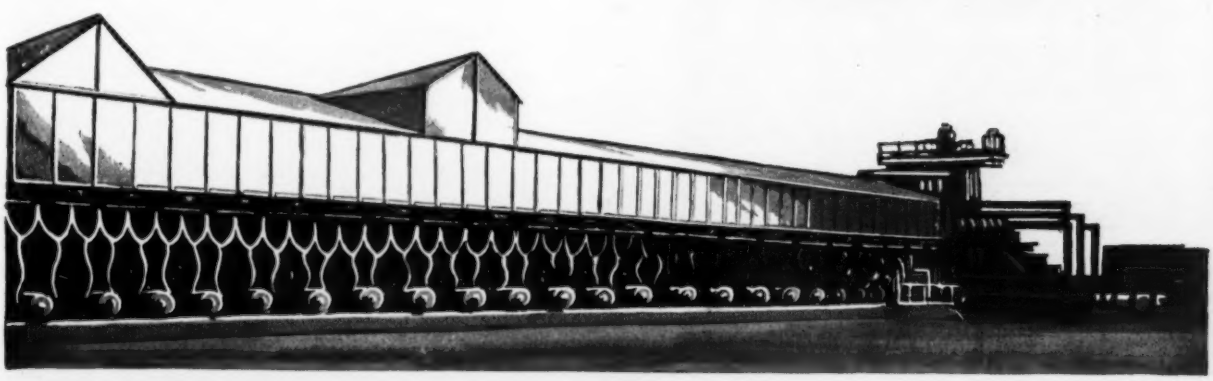


DRIER EQUIPMENT

handling the heavy, irregular loads thrown on the boilers by the bleachers and digesters, and because of the importance of the flow meters in eliminating the waste of steam due to faulty operations.

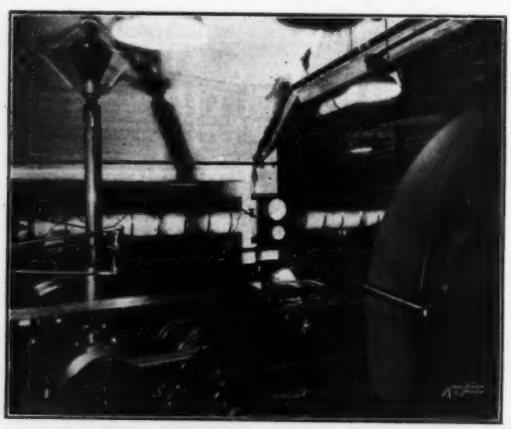
At the time this opinion was expressed, after several years' experience with the instruments, the disposition of the various flow meters was as follows:

11 on boilers,
1 on the steam distribution line to the digester,
1 on the steam supply line to the main engine,
1 on the steam line to the bleaching plant,
1 on a 10-inch steam line serving several machines,
1 on an 8-inch steam line serving several machines.

These meters are employed for the usual determination of the pounds of steam generated per hour by the various boilers, as well as for measuring and recording the steam consumption of all main equipment, and as careful records are kept of the coal used, showing the shipper, grade, flame, ash, clinkers, dumps and amounts, these records prove valuable guides in the selection of the proper coal to purchase.

Daily, the costs per boiler horsepower for the two boiler plants serving the mills are assembled, including all expenses for fuel, labor, supplies, overhead, etc., and these records indicate immediately the effect of any efforts made for greater economy in steam generation and cost of power, deductions from which would be well nigh impossible without the information furnished by the flow meters. The result is that an unusually high boiler room is attained at relatively small expense, with accompanying reduction in power costs. Indicators at the boilers also call attention to the distribution of the load and to possible bad conditions within the boilers, such as dirty tubes, holes in the fire, foaming and priming, improper feed water regulation, etc., enabling the boiler room crew to maintain really high records of efficiency.

Outside the boiler room, also, the flow meters prove valuable detectors of wastes and extravagances, showing up the effectiveness of bleacher and digester operation and making it possible to take preventive steps should excessive steam demands develop. The knowledge thus afforded of steam flow may also indicate advisable and highly profitable modifications in practices previously accepted as essential.



Courtesy: Republic Flow Meters Co.

FIG. 4

Flow meters measure steam to pulp drier at Champion Fibre Co.

For instance, an investigation of the heat balance indicated by the flow meter charts showed that the exhaust from a 1,000 k.v.a. engine would suffice for the bleaching machines previously served with live steam. Adopting the more economical practice resulted in a net saving of more than $5,000.00 in a single year, more than the entire cost of the flow meters installation.

Another large saving made possible by the use of the flow meters was the elimination of much waste by the paper machine, by a careful regulation of the steam supply. At times the machine drew so heavily on the boilers that the operation of the entire plant was seriously disturbed. The cause of the abnormally heavy demands, previously undetected, was readily discovered from a study of the flow meter charts. The correction, once the cause was definitely known, entailed no great expense and promptly effected a noticeable saving of coal in the boiler room and more efficient operation throughout the mill.

Courtesy: Republic Flow Meters Co.

FIG. 5

Flow meters record steam demands of liquor making room, soda-sulphate bleach room, sulphite bleach room, sulphite digesters, soda-sulphate digesters, extract department, paper mill driers, pulp machine engines—20-pound system.

These and numerous other incidental economies attributable to information gleaned from study of the charts of the sixteen flow meters have been secured at a total expense of $771.62 a year. That is, the overall operating cost of the sixteen instruments, including all fixed charges, amortization, depreciation, repair and attendance expenses, totals to such amount, or 13 cents per day per meter.

Attainments Reported By Mill Engineers

Commenting some years ago upon a comprehensive installation of flow meters made at the Northern Paper Mills, Green Bay, Wis., in the early twenties, the plant engineer remarked that by making use of the information afforded by the flow meter charts, it had been possible, not only to increase the boilers' effective rating very considerably, but at the same time to effect an improvement in the evaporation per pound of coal amounting on the average to about 33 per cent. In other words, from the information gained from the flow meter records it had been possible to secure about the same results with 3 tons of coal as had previously required the consumption of 4 tons. Such attainment, obviously, meant large savings in operating costs and, what in this case proved even more advantageous, enabled a large increase in steam demand to be met without entailing expensive enlargement of the plant.

To quote this meter enthusiast, following a detailed exposition of practices and operations in the plant, he stated: "Meters are valuable as watch dogs, constantly alert to prevent needless waste. They are ceaseless, inoffensive drivers. They proclaim errors in faulty operations and often protect the innocent. They lead the way to better products and more efficient operation. They establish at times a goal, a high mark which is valuable as a record to 'shoot at.' They prepare the way for friendly competition, which

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Paper mill executives place purchasing on a scientific basis. Quality is accurately estimated . . . economy allotted its full importance. So WITCO Blanc Fixe appeals to both the purchasing and production departments of progressive mills.

Blanc Fixe, as supplied by WITCO, equals the industry's highest specifications for quality. It stands for "known reliability" . . . for excellence which never varies.

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The position of WITCO as direct factors in the products we supply is a factor in thrifty buying. It is an advantage revealed by tangible, worth while savings.

WITCO Paris Black is also offered upon these terms . . . a product of tested excellence, giving satisfaction wherever quality is paramount.

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injects a touch of 'the game' into a man's routine work. And, finally, their presence is, in short, indicative of good management."

D. B. Davies is another of the mill men who is a firm believer in flow meters, advocating their use, not only in the boiler room, on steam lines to and from digesters and for the regulation of steam requirements for paper machines, etc., but in connection with hot bleaching, where the use of flow meters may prove a very good paying investment. This is particularly true in the numerous instances where the bleachers are not adequately insulated against heat losses, for the flow meter is an instrument which will show positively whether steam is wasted and the magnitude of the loss.

Other Examples of Economies

Numerous other examples of striking economies made possible by following the plain dictates of the flow meter findings could be cited and the opinions of new advocates of flow meter control and regulation in almost the full schedule of operations discharged in pulp and paper mills could be quoted almost daily; but the foregoing should suffice to indicate how flow meters may be highly instrumental in profit taking. The information their use affords is always valuable, invariably well worthy of careful heed, whether the mill is a modern one, efficiently operated and managed and supplied with all the refinements which tend toward low cost production, or an older establishment run along antiquated lines and struggling desperately to make both ends meet.

The truth of the matter is that the less efficient a mill may be operated, due to weak management or obsolete equipment and practices, the more necessary is the information cheaply afforded by those efficient waste detectors, the modern flow meters. The installation and use of flow meters on paper machines for the first time will almost invariably disclose possibilities of truly astonishing savings. And, it only requires a 12 to 13 per cent cut in power costs to yield a 20 per cent increase in profit taking.

Bailey Meter Exhibit

The Bailey Meter Company of Cleveland, Ohio, will occupy Booth No. 51 at the Eighth National Exposition of Power and Mechanical Engineering, Grand Central Palace, New York, during the week of December 2-7, 1929. The following products will be shown: Bailey Meter Automatic Control as applied to the operation of steam boilers and to the maintenance of various factors in process work; Bailey Thermo Hydraulic Feed Water Regulators, Pump Governors, and Excess Pressure Regulators; Bailey Fluid Meters of both the mechanically and electrically operated types for the measurement of steam, water, gas and other fluids; Selsyn operated devices for long distance transmission of readings of pressure, temperature, draft, liquid level, motion, speed and other factors.

The special features of the Bailey Meter Exhibit will consist of a long distance type Selsyn operated Liquid Level Recorder and Indicator in operation; A Bailey Meter control Drive cut away to show the operation of solenoid operated clutches, time limits, travel limits and other individual features; and a large display of photographs, diagrammatic layouts and chart records from actual installations of Bailey Meter Control in the various industrial plants and central stations throughout the country.

The Selsyn Motor System of Long distance transmission which has for some time been used on battle cruisers for the direction of gun fire has now been applied to power plant metering instruments for long distance transmission of factors such as pressure, temperature, draft, liquid level, speed, motion, etc. An actual Bailey Liquid Level Recorder of this type will be exhibited and photographs and drawings of other applications of this system of transmission will be shown.

The booth will be in charge of H. M. Hammond, general sales Manager; H. C. Wheaton, manager New York branch office, and H. C. Tanner, Manager Philadelphia branch office.

Obituary

William H. Cook

[FROM OUR REGULAR CORRESPONDENT]

DAYTON, Ohio, November 25, 1929.—Residents of West Carrollton last week received news of the death of William H. Cook, former superintendent of the American Envelope Company of that place.

Mr. Cook died at Pueblo, Col., and the body was shipped to St. Louis, according to a message received here, where funeral services were conducted. Mrs. Adah E. Cook, the widow of Mr. Cook, resides in that city. Mr. Cook had gone West for his health some time before he was fatally stricken.

He will be remembered by many residents of Dayton and West Carrollton, having been a practical plant superintendent for many years.

Besides his widow, he is survived by his daughters, Mrs. Abbie R. Brown of St. Louis, and Mrs. Mildred McIntyre, of Ottawa, Can.

Robert T. Huston

[FROM OUR REGULAR CORRESPONDENT]

CONNERSVILLE, Ind., November 25, 1929.—Robert T. Huston, vice president and superintendent of the Connersville Blower Company, died suddenly at his home on the evening of November 14, 1929, due to an acute heart attack.

Mr. Huston had been connected with the Connersville Blower Company since its organization in 1893. In addition to his interest in building up and maintaining the factory equipment and efficiency, he was active in other industrial, civic, lodge and social work of the city.

Claude M. Pratt

[FROM OUR REGULAR CORRESPONDENT]

CARTHAGE, N. Y., November 23, 1929.—Claude M. Pratt, head electrician of the National Paper Products Company, died at his home here during the past week following a long illness. He was born here in 1877 and had resided here virtually his entire life. He had been connected with the paper company for the past several years and was regarded as a valuable employee. For a time he resided at Beaver Falls where he held a similar position in a paper mill at that place. He is survived by a wife and three sisters.

New England Power Output Record

New England Power Association, controlled by International Hydro-Electric System, a division of International Paper and Power Company, produced 161,847,000 kilowatt hours electric energy in October, a new high record for a single month; 19 percent over the output of the association in October 1928; and 63 percent over that of October, 1927. In the first ten months of this year the output of New England Power Association was 1,454,606,000 kilowatt hours, 30.5 percent greater than in the corresponding period of 1928 and 64.3 percent greater than in the first ten months of 1927. The output of the association in the twelve months ended October 31 was 1,716,290,000 kilowatt hours, an increase of 29 percent over the output of the association in the twelve months ended October 31, 1928.

The growth of New England Power Association is further shown by comparing its output increase of 30.5 percent in the first ten months of this year over the corresponding period of last year, with its output increase of 25.9 percent in the first ten months of last year over the corresponding period of 1927.

The output of electric energy of utility power plants in the United States in the first nine months of this year—the latest figures available—was 11.5 percent greater than in the first nine months of last year. This compares with an increase in output of 14.9 percent in the same period by the plants of New England Power Association.

Regional Pulpwood Costs To Be Studied

Charles W. Boyce, secretary of the American Paper and Pulp Association, announces that a regional study of pulpwood forestry is about to be undertaken by the Woodlands Section of the association, of which he is secretary-forester. The determination to make this study was made after many conferences with men in the industry. Although this study is centered about pulpwood costs it is actually a study of present timber supplies and of forestry. By making costs the focal point, the technical factors in forestry can be interpreted in terms which will be more understandable and, therefore, of greater value to mill executives in planning business policies.

Technical advance which is making possible the use of new pulpwoods, has opened wide the whole question of costs. The intense market competition resulting from excess production capacity is forcing a regional reallocation of the industry, in which wood costs are a deciding element.

These conditions obviously influence forestry as it concerns the paper industry. It is plain that forestry is not merely a question of future supplies regardless of cost, but that it is a matter of costs and its ability to compete in the various regions and with various other materials. This study is designed to bring out the elements of competition which forestry must face and to determine in a preliminary way the degree to which it can compete now and in the future in the various regions.

Overproduction Creates Intense Competition

Overproduction and the resulting intense competition in the paper industry has forced an industry-wide focusing of attention upon costs. It is plainly evident that the mills which can produce a standard paper at lower costs have a market advantage which is unassailable. By and large each mill is searching for permanent advantages of this nature.

In the cost of pulpwood and in cost of distributing the final product from the mill, there are wide variations. These differentials occur largely between regions and, in the case of pulpwood, between different types of pulping processes. In manufacturing costs, referring largely to plant operations, the industry has already eliminated the wide variations; only minor variations occur between mills in the same classification that are reasonably well managed.

Pulpwood costs and distribution costs are closely related. Unfortunately many new kinds of pulpwood, important because of their relative cheapness, are located in regions far removed from present centers of paper consumption. The advantage of reduced pulpwood costs is, to some extent, offset by the greater transportation costs. But the wide variation in pulpwood costs from $5 a cord in the South and West to over $17 per cord of rough wood in the Northeast, amounting to approximately $24 per ton of a chemical pulp paper, is far greater than offsetting increases in distribution costs in the paper grades which can be manufactured in the three regions.

Technical progress in the substitution of pulpwoods has been so rapid that practically all grades of paper either are or will be affected and most of them directly. The regional variations in pulpwood costs are, therefore, highly important for they must be considered in the business policies of practically every mill. This will be true as long as paper manufacture and marketing remains highly competitive. Pulpwood costs, therefore, are the crux of an industry-wide problem.

More Than Present Costs Involved

More than present costs, however, are involved. The paper industry has learned that a mill must control, in one way or another, its source of raw material for permanent, sustained operation. This immediately involves forestry and future pulpwood costs. Because of the depletion of virgin timber and the necessary dependence of the industry upon second growth in all regions except possibly the Pacific Northwest, the problem of forestry is an immediate one rather than a problem of the future and its costs play an important role in the determination of present business policies.

Assuming that pulpwood can continue to compete successfully as a paper making material a company in the Northeast, for instance, may be forced to decide between four major alternatives:

(a) Discontinuing pulp mill and continuing paper mill on purchased wood pulp, either imported or domestic;

(b) Discontinuing pulp mill and continuing paper mill but depending upon a company owned pulp mill in a new forest region.

(c) Building up in the present region a vertically integrated industry from ownership of sufficient forest land to meet mill requirements to the final production and distribution of paper;

(d) Complete shut-down when competition is no longer possible.

Mills in new regions are faced with the necessity of determining their chances in regional competition. This resolves itself largely into a consideration of present supplies and prices of pulpwood and future costs of pulpwood and methods of obtaining it, as compared with other regions. These mills must decide between:

(a) The purchase and management of sufficient forest land to meet mill requirements on the basis of round wood;

(b) The purchase and management of sufficient forest land to meet mill requirements if forest production is regulated to produce products other than pulpwood, the pulp mill requirements being met by thinnings and waste;

(c) The purchase and management of enough forest land to serve as a reserve to supplement in times of stress the purchase of pulpwood from other forest owners.

(d) The complete dependence upon purchased wood.

Woodland Section Plans Symposium

In order that policies of individual mills may be sound it is plainly evident that the pulpwood situation in each region should be known. Although knowledge of supplies and conditions of growth should be extended, it is the reaction of these factors upon costs that holds the greatest interest. The interpretation of facts of silviculture, resources and conditions of utilization into terms of present and future pulpwood costs gives to management understandable and comparable data upon which business policies may be based. With some idea of comparative costs management can plan its activities in relation to market demands and possible shifts in these demands. The availability of such information, supplemented by a similar availability of knowledge concerning distribution costs, permits the most profitable adjustment between the elements of production and the final product. This is urgently needed to enable the industry to reach and maintain stabilization during a period of transition to new and lower cost situations.

The Woodlands Section of the American Paper and Pulp Association has planned a symposium on present and future pulpwood costs as a preliminary step in providing information essential to intelligent determination of business policies by individual mills. This study will be conducted by committees of foresters in each region. A general outline of study has been prepared as a guide for the committees and as a means of obtaining comparable information. Wherever possible preliminary meetings will be held at which the Secretary will explain the purpose of the study and the type of information desired and at which committees will be selected to carry on the study. The committee reports will be presented at the annual meeting of the Section in February, 1930, for discussion and for comparison of the regional possibilities.

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PAPER IMPORTS AND EXPORTS

Both imports and exports of paper increased in September, compared with the same month of last year, according to the Paper Division of the Department of Commerce.

Total value of paper exports in September of this year was $2,993,176, compared with $2,098,810 for the same month of last year. For the nine months ending September this year exports were valued at $28,125,878, compared with $22,641,979 for the corresponding period of last year.

The total value of imported paper in September was $13,352,579, compared with $11,888,659 imported in September of last year, while during the nine month period ending September this year the value of the imports was $118,796,313, compared with $113,406,667 for the same period of last year.

Imports of paper base stocks in September were valued at $10,487,066, compared with $10,192,816 in the same month of last year.

Pulpwoods imported in September amounted to 166,307 cords, valued at $1,947,375, compared with 184,830 cords, valued at $2,092,832, imported in September of last year.

In September also 392,246,360 pounds of standard news print paper were imported, valued at $11,617,098, as compared with 329,296,257 pounds, valued at $10,592,927, imported in the same month of last year.

There was 342,129 pounds of cigarette paper imported into the United States in September of last year valued at $95,079, increasing in the same month of this year to 1,086,509 pounds, valued at $417,576.

Tissue paper imported in September of this year totaled 488,966 pounds, valued at $239,734, compared with 432,444 pounds, valued at $199,146 in September of last year.

Exports of news print paper in September totaled 2,070,108 pounds, valued at $83,583, compared with 1,148,295 exported in September of last year, valued at $42,588.

September exports of book paper, not coated, amounted to 2,486,392 pounds valued at $172,652 compared with 1,543,001 pounds, valued at $108,625 exported in the same month of last year.

Cover paper exports in September of last year amounted to 113,627 pounds, valued at $22,415, compared with 215,788 pounds, valued at $32,945, exported in the same month of this year.

Surface coated paper exports in September of last year totaled 1,342,792 pounds, valued at $108,311, decreasing in the same month of this year to 552,215 pounds, valued at $65,339.

THE POWER SHOW

Within the last decade power has changed our minds and our methods. Every American manufacturer faces a daily crisis—the one demanding increased production with a corresponding reduction of material costs, labor costs and overhead expenses. Through this critical situation he must rely upon the development of new machines and new methods for saving time, effort and money—seeking every new mechanical equipment that can be put to work in any corner of his factory.

Alive to the necessity of keeping keenly abreast of the times, production and engineering staffs are ever on the lookout for new ideas that may be adapted to manufacturing processes. Every year, therefore, the eyes of the engineering world are focused on the National Power and Mechanical Engineering Exposition, more familiarly known as the National Power Show, for a solution of the thousand and one problems that are constantly confronting them. As usual the Show will be held at Grand Central Palace, New York, during the week of December 2.

The Exposition presents an opportunity for comparison of competitive machines, appliances and methods by the potential purchaser and the manufacturer's representative is better enabled to understand the problems confronting the operators and executives in his field. The manufacturer is also enabled better to cope with these problems and to visualize the extent to which his machine or appliance is applicable.

Forward looking engineers are cognizant of the fact that direct comparison is the basis of all sound buying and they have also come to know that the National Power Show presents the greatest opportunity in the world for making the ultimate choice.

The exhibits range from fuels and combustion equipment to displays covering power transmission and application, machinery, materials, belts and belting equipment, instruments, tools and supplies, heating and ventilating, refrigeration and material handling devices.

Executives must keep posted on new developments in their particular line so as to take advantage of possibilities for savings. They do not necessarily have to know all the details. Leave that, with confidence, to the chief engineer. But it is essential that the executive know the difference between, say, a carbon dioxide recorder and a boiler feed-water regulator. The more the plant executive learns about the modern power plant and its equipment, the better able he will be to deal intelligently with the requests and suggestions of his operating engineer.

The National Power Show presents the last word along educational lines in engineering efficiency because in one day at the Show an executive would make more contacts than could possibly be made in a month's journey around the country visiting various plants in which he might be interested.

Because approximately a ton of coal is required to produce a ton of paper it is not surprising that an increased number of paper mills are either building new power plants or installing improved power plant equipment in order to cut down operating costs be-

cause coal is one of the largest items in the cost of producing paper.

The latest developments in the application of power in the process industries will be shown at the National Power Show. There will be numerous exhibits relating to power generation, distribution and utilization and in addition, there will be exhibits of various control and recording instruments and many others showing the possibilities of modern heating and ventilating.

It is possible to mention only a few of the outstanding features of this great international exposition and the opportunities it offers in every branch of the power and mechanical engineering industry. For seven years the National Power Show has measured every great stride made within the industry and the coming Exposition promises even greater achievements.

News Print Production For October

Production of news print in Canada during October, 1929, amounted to 251,914 tons and shipments to 252,591 tons, according to the News Print Service Bureau. Production in the United States was 122,009 tons and shipments 122,040 tons, making a total United States and Canadian news print production of 373,923 tons and shipments of 374,631 tons. During October, 23,841 tons of news print were made in Newfoundland and 1,727 tons in Mexico, so that the total North American production for the month amounted to 399,491 tons.

The Canadian mills produced 295,492 tons more in the first ten months of 1929 than in the first ten months of 1928, which was an increase of 15 per cent. The United States output was 9,260 tons or 1 per cent less than for the first ten months of 1928. Production in Newfoundland was 20,324 tons or 11 per cent more in the first ten months of 1929 than in 1928 and in Mexico 2,213 tons more, making a total increase of 309,219 tons or 9 per cent over the same period in 1928.

During October the Canadian mills operated at 88.8 per cent of rated capacity, United States mills at 80.4 per cent and Newfoundland mills at 112.0 per cent. Stock of news print paper at Canadian mills totalled 30,064 tons at the end of October and at United States mills 26,573 tons, making a combined total of 56,637 tons which was equivalent to 3.5 days' average production.

Finnish Pulp Mills Plan Extensions

WASHINGTON, D. C., November 27, 1929.—A report from Commercial Attache Watson at Helsingfors states that it is reliably reported that there will be during the coming months several extensions in Finnish mills manufacturing chemical pulps. The plant of the A. Ahlstrom Company at Warkans is to be extended to capacity from 36,000 to 48,000 metric tons; the present plant of the Ensco-Cutzeit concern will increase its present plant capacity from 55,000 to 80,000 tons. These two additions to sulphite production in Finland total around 37,000 tons yearly, and if new operations of the Waldhof companies at Kexholm are taken into consideration, the expansion in the national output of pulp is proportionately larger. At the present time the market for strong sulphite is good and prices are reported steady. The entire production of the Finnish mills has been disposed of for 1929, and considerable sales have been effected for 1930 delivery.

Chase Bag Co. Expansion

INDIANAPOLIS, Ind., November 25, 1929.—J. Dana Cramer, manager of the Goshen, Ind., plant of the Chase Bag Company, has announced that the Goshen plant will be increased by 63,000 square feet of floor space. A contract has been let with a contracting firm in Cleveland for the erection of an addition 122 by 231 feet to be erected south of the present one-story addition to the original four-story plant. The addition will be ready for occupancy within two months.

Paper Institute Secures Dr. Otto Kress

[FROM OUR REGULAR CORRESPONDENT]

APPLETON, Wis., November 25, 1929.—Dr. Otto Kress, prominent in paper mill circles, has been appointed as technical director of the newly created Institute of Paper Chemistry at Lawrence College, Appleton, Wis. Preparations will be started at once for the program of the Institute, and actual training of men for the pulp and paper industry in the graduate school will start in February, 1930.

Dr. Kress is ably fitted for the extensive training and research program to be undertaken by the College, because of both his education and experience. He is a graduate and former professor in the chemistry department of Columbia University, and has received the degrees of Bachelor of Science, Master of Arts and Doctor of Philosophy there.

From 1912 to 1914 he was with the Badische Company, New York, and then went to the United States Forest Products Laboratory, Madison, Wis., where he was in charge of the pulp and paper section until 1918. After two years of work with the DuPont Company, Wilmington, Del., he became research director for the Consolidated Water Power and Paper Company, Wisconsin Rapids, Wis. Following this he was superintendent of manufacturing for the Thilmany Pulp and Paper Company, Kaukauna, Wis. For the last year he has been serving as a private consultant. He is the author of several research articles.

Temporary laboratories have been set up in a part of the gymnasium just abandoned by the College in favor of a new one. Later permanent quarters will be established, where there also will be an extensive reference library. Paper mills have subscribed $300,000 to maintain the Institute.

Boston Paper Market Firm

[FROM OUR REGULAR CORRESPONDENT]

BOSTON, Mass., November 25, 1929.—The Boston paper market has been firm with a moderate volume of orders during the last week, both in bonds and ledgers and other fine papers. In kraft there was a little slackening about the middle of the month on account of the New York stock market but it is fairly well back to normal at the present writing. The kraft market is expected to remain fairly normal for the rest of the month.

The box board market shows no marked change. Quotations continue at the same unsatisfactory levels. Buying is from hand to mouth. Indications are that there will be a good amount of activity in box board up to the first of the year. Box makers do not appear to have much of a supply.

With the inventory season drawing near, mills seem to be buying as little paper stock as possible. There is also a feeling that the break in the stock market has also affected the amount of purchasing. Any price changes have been downward. Manufacturers have tended to made the prices of mixed paper relatively nearer New York levels. No. 1 mixed paper is now quoted in the Boston market at .42½ to .47½, compared with a previous range of .45 to .50. Overissue news is cut from .70 @ .75 to .60 @ .70. Old newspapers have suffered a drop from .50 @ .55 to .45 @ .50 and box board chip from .55 @ .60 to .45 @ .50. Other grades remain at the same levels.

Government Paper Bids and Awards

WASHINGTON, D. C., November 27.—Government Printing Office has received the following bids for 9,555 pounds of 24 x 38 inches, 136½ lbs., white ledger paper; Carew Manufacturing Company, at 25.4 cents per pound; R. P. Andrews Paper Company, 36 cents; Barton, Duer & Koch Paper Company, 27 cents; Dobler & Mudge, 28 cents; Whiting Paper Company, 27.5 cents; Atlantic Paper Company, 25.85 cents; Old Dominion Paper Company, 28.79 cents.

The Carew Manufacturing Company will furnish 6,825 pounds (50,000 sheets) of 24 x 38 inch 100 per cent rag white ledger paper at 25.4 cents per pound bids for which were received on November 15.

Courtesy of Automobile Topics

The first Hudson automobile, introduced in 1909

The first pound of Liquid Chlorine produced in the U. S. A., 1907

Over 20 Years Ago E B G Pioneered in the manufacture of Liquid Chlorine

EVENTS of 1909!

Faith and vision, as well as constructive ability, were required of the automobile industry back in 1909. Pioneer qualities . . . which, in this instance, have speeded the world's work and pleasure.

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Liquid Chlorine found bleaching processes uncertain, rule of thumb operations. Today, thanks to the constructive thought and research of E B G, bleaching results are scientifically forecast.

E B G Liquid Chlorine and E B G initiative will continue to be team workers in the successful application of this important chemical.

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Section of the
Technical Association of the Pulp and Paper Industry

AN ORGANIZATION FOR THE ENCOURAGEMENT OF ORIGINAL INVESTIGATION AND RESEARCH WORK IN MILL ENGINEERING AND THE CHEMISTRY OF PAPER, CELLULOSE AND PAPER-MAKING FIBERS GENERALLY; IT AIMS TO PROVIDE MEANS FOR THE INTERCHANGE OF IDEAS AMONG ITS MEMBERS IN ORDER THAT PROCESSES OF MANUFACTURE MAY BE MADE MORE EFFICIENT AND IMPROVED ALONG TECHNICAL LINES.

Edited by
RONALD G. MACDONALD, Secretary

News Print and Ink Penetration *

By H. Andrews[1]

As we read our favorite paper from day to day, we are, for the most part, interested in the news contents. We are not perhaps, on the alert to notice defects in the news, and the presence in the paper of an occasional oiliness or dirtiness will pass unnoticed. Through the vigilance and care of the publisher, we are enabled to enjoy a clearness of print, and we read the news, cast our paper aside, and seldom think of the labor and attention necessary to secure a print whose quality, by its very clearness is passed by without comment.

The question of faulty printing has been the subject of discussion between the ink manufacturer, the publisher and the paper manufacturer for years, each in turn considering the other at fault but without a definite solution of the problem being reached.

It is the object of this paper to present the factors which have a bearing on the problem of the production of good printing with the idea in mind of clarifying the situation.

Non-Drying Ink

Paper is a mass of felted fibers in the form of a sheet and as such has numerous small irregular spaces between these fibers. News print ink is made up from finely divided carbon black pigment, ground into oil which is chiefly, if not all, a mineral oil and produces a non-drying ink, that is, one which depends upon absorption of the oil into the pores of the paper and not upon a drying by the action of oxidation. The carbon black pigment is held by the fibers on the surface of the paper while the oil is drawn in and spreads itself over the surfaces of the individual fibers, with which it makes contact, until it cames to a state of rest. Under certain conditions of quantity or viscosity the oil will spread until the fibers forming the opposite side of the paper are reached where it will show as a brownish stain on that side. This stain is known as show through or ink penetration, of which complaint is commonly made. If less ink is used to prevent this condition then danger from grayness of print is encountered.

The composition of average news print is about 75-80 per cent ground wood and 25-20 per cent sulphite pulp. From this it will be realized that, to a large extent, the characteristics of the ground wood fibers will be a governing factor in the characteristics of the finished paper. Ground wood pulp does not possess to any degree, uniformity as regards fiber size or smoothness of fiber surface, as does chemical pulp; rather it is composed of fibers varying greatly in length, fineness and surface exposed. Thus ground wood fibers are excellent medium for taking up the oil of the news print ink. In the use of ground wood, as a low cost pulp, the part it has played in the development of the high speed printing of news as regards the use of such rapid drying and low cost ink as news print ink, has too often been lost sight of.

Ground Wood a Controlling Factor

As the freeness of ground wood pulp decreases the fiber length becomes shorter and the fineness greater, thus increasing the total surface exposed. From this one might expect that news print made from ground wood of the lower freenesses, other things being equal, would have better resistance to ink penetration; and since the fibers would felt closer together, a finer finish would result. Smoothness of finish is obtained by passing the paper through the calender stack where the steel rolls by reason of their weight press the fibers closer together, and by friction iron out the paper surface. Calendering then produces a smoothness of finish which is highly desirable. Unfortunately, however, as the fibers are pushed tightly together some of the total surface will thereby not be available for the oil of the ink to spread over.

Fineness of fiber then makes for better finish, it makes for greater resistance to ink penetration and calendering makes for better finish and less resistance to ink penetration. They both tend to lower porosity. The lower the porosity the lower will be the viscosity of the ink it is necessary to use but the greater finish demands less ink so they offset each other to some degree.

From this reasoning it would appear that the ideal would be to produce the finish on the paper with as little pressure as possible, and in this way there would be conserved the fiber surface, giving resistance to ink penetration which is now lost through the heavy calendering, and with the higher porosity attained an ink of higher viscosity could be used which again means more resistance to ink penetration.

News Print Finish

The finish of news print can be determined to some degree of satisfaction by means of the Ingersol Glarimeter. Porosity also may be measured. But there is no known means whereby the actual surface presented by the fibers for ink resistance can be ascertained nor is there any way of determining how much ink is necessary in relation to the degree of finish. Neither may we determine the viscosity necessary in relation to the porosity, unless they be under test conditions on an actual printing press.

Paper Variables Affecting Printing Quality

The variables in the manufacture of news print affecting the

* Presented at fall meeting Pacific Coast Section of TAPPI, Tacoma, Wash., Oct. 5, 1929.

[1] Member TAPPI, Powell River Co., Ltd., Powell River, B. C.

printing quality are ground wood freeness, moisture in paper, calendering and per cent of sulphite. The latter two are fairly constant. By control of the former two, that is, ground wood freeness and moisture, the paper should be fairly constant.

From the standpoint of ink, the properties which come into play are coefficient of viscosity, fineness and per cent of black carbon pigment. Printing inks are manufactured by the different companies according to their own formula which are apparently satisfactory as to fineness and per cent of pigment. It is supplied at varying degrees of viscosity.

It will be readily understood that an increase in the temperature of the ink would result in a decrease of its viscosity, or in other words, as the ink is warmed it will spread over a correspondingly greater area. Thus having the same effect in so far as ink penetration is concerned as if more had been used.

What the printer desires in addition to mechanical perfection is quality of print. He wants a clear black impression, devoid of dirtiness, smudges or penetration. Along with this he aims at the lowest possible ink consumption. For best results he must select an ink of as highly viscosity as possible.

Ink Viscosity

How important is the selection of ink of the correct viscosity is revealed by the following illustration. A customer reported trouble was being experienced as a result of ink penetration. A sample of the ink was forwarded and this was compared with that used by another customer with perfect satisfaction and with another sample the customer had under consideration. A series of viscosities were determined on these three inks and these are found in the following table. For purposes of convenience the satisfied customer will be referred to as A and the ink No. 1 and the dissatisfied customer as B and the unsatisfactory ink as No. 2, No. 3 being the alternative which B had under consideration.

Viscosity Co-Efficients of Ink, Relative to Water at 68 Deg. F.

Temperature of ink	No. 1 Ink Customer "A"	No. 2 Ink Customer "B"	No. 3 Ink "B" Alternative
60 deg. F.	5,550	3,800	5,525
65	4,300	2,500	4,100
70	3,310	1,654	3,110
75	2,600	1,000	2,400
80	2,120	955	1,908
85	1,800	935	1,600
90	1,610	920	1,450

Referring to the table it will be noted that the No. 1 ink used by "A" with excellent results is about double the viscosity of the No. 2 ink used by "B" which was occasioning the trouble. Subsequently on the adoption of No. 3 ink by "B" which as the table shows, had a viscosity very similar to No. 1, the difficulty was immediately overcome.

A further interesting point is the large variation in the viscosity of the ink with temperature and upon reference to the table again it will be noted that a change in temperature of about 15 deg. F. will result in a change in the viscosity in the ratio about 2.1.

It would seem then that every care should be used in the selection of the ink in the first place and moreover it would appear that some form of thermostatic control is almost essential to the maintenance of uniform and consistent results.

With the ink supply regulator with which some news print presses are now equipped, known as the "spray type fountain," the mechanism is such that a constant volume of ink is supplied per minute regardless of temperature variation and thus is delivered a constant volume of carbon black pigment per minute to the paper. Thus the temperature variation here can have no influence on ink penetration. Not so, however, with the old type fountain; for in this case a variation in temperature of the ink supply will cause a variation in the volume of the ink to the paper per minute; and unless corrected by resetting the feed, will produce a variation in the blackness of the print and penetration as well.

Temperature Control for Ink Application

From a study of the printing process of news print it seemed logical that temperature control should be applied to the ink as it is applied to the paper and the oil of the ink as and after it is drawn into the paper.

By test it was found that temperature variations of the ink supply within a range of about 3 deg. F. did not have an appreciable bearing on the temperature of the ink as it was applied to the type, but in this particular test it was found that friction heat from the rolls caused the ink, as supplied to the type, during the course of an ordinary afternoon run of about two hours, to warm up 12 deg. F.

Now a rise of 12 deg. F. would increase the spreading power of the oil some 40 per cent according to the viscosity tables, but during the test there was not noticed any increase in penetration and as the paper did not appear to have any excess capacity for oil, the only conclusion arrived at was that the paper, which had remained uniform in temperature, had kept the oil of the ink at a fairly constant temperature too, which is reasonable when the small amount of ink in comparison to the bulk of paper is considered.

It appears that the temperature of the paper is a controlling factor in the maintenance of a uniform viscosity of the oil of the ink at the vital spot for ink penetration. Then ideal conditions necessary for a uniform quality of print in this respect would be to have the paper at the time of printing and for a period afterwards, at a uniform temperature. This temperature should be the maximum it will encounter. An ink then should be selected of as high a viscosity as possible, one that will just print the paper without smudging.

Should it not be practical to maintain the paper temperature throughout the year at a maximum summer temperature, the alternative would be to have an ink of viscosity suitable to winter paper temperatures and another of greater viscosity to suit summer temperatures. Of course it would be necessary in either case to keep the paper temperature as nearly uniform as possible. If there is tendency to ink penetration in the summer with the particular ink a plant is using, then better results should be obtained in the winter time with the same ink. If it is found that such conditions are obtained it is logical to assume that a thicker ink might be used during the summer.

If the press were running steadily for a longer time than during the tests it is conceivable that the ink to the type might be warmed up more and possibly reach a point where it too, along with the paper temperature, had an influence on the ink penetration.

Pacific TAPPI Committee Appointments

The new executive committee of the Pacific Coast section of the Technical Association of the Pulp and Paper Industry, of which R. S. Wertherner, of the Longuino Fibre Company, is chairman, has made the following committee appointments: Membership:—Sigurd Norman, Newberg, Ore., chairman; E. P. Ketchum, Powell River, B. C., and M. W. Black, Millwood, Wash. Program and Publicity: A. H. Hooker, Tacoma, Wash., chairman; L. M. Wood, Tacoma, Wash., R. Reid, St. Helens, Ore., and I. H. Andrews, Powell River, B. C.

It is expected the Dr. H. K. Benson, head of the Department of Chemistry and Chemical Engineering of the University of Washington, Seattle, Wash., will attend the annual meeting of TAPPI in New York and in addition to representing the section, he will also read a paper during the regular meeting of the association on February 18-20, 1930, at the Pennsylvania Hotel in New York City.

Please Change It

In Volume III of the Manufacture of Pulp and Paper (Second Edition) page 55 (page 50 in the first edition) is a chart showing the capacity of deckers. The speed given as 60 feet per minute wire speed in the first curve should be 160 feet.

Stack Losses in Sulphate Mills*

By George H. Horne[1]

The solid, or non gaseous, material carried by gases and discharged to the atmosphere, through the stack, usually represents a monetary loss or is the source of a nuisance or it is both.

Plant managers are usually keenly aware of either condition but are often puzzled as to ways and means to definitely evaluate the loss. Occasionally the belief has been held that there is no way by which the quantity of the loss can be determined; consequently they have been accepted and charged against plant operation.

It is not intended to suggest that a new account be opened up with the stack as debtor involving perhaps daily stack loss determinations, though in some smelters, this has been done. A furnace operating under similar conditions of temperature, draft and charge will show from day to day similar losses which can be stated as a percentage of the charge. Therefore, one to two determinations of the stack loss will usually suffice at least until such a time as furnace operations are definitely changed.

The method of stack loss determination to be described is not new, but has been in use quite a number of years during which time it has proved quite satisfactory and reliable. It is not claimed as the standard method though it comes nearer to that than any other.

Stack Loss Determination

The determination of the weight of solids carried by a gas stream is made in two operations, namely the determination of the rate of flow of the gas in the flue, and the determination of the concentration of solids carried by the gas.

Determination or Rate of Flow

The rate of flow, usually expressed as cubic feet per minute at the temperature and pressure of the flue is probably most easily determined by a few pitot tube traverses of the flue section to determine the average velocity of the gas, which with the cross sectional area of the flue, of course, determine the rate of flow.

For the velocity determinations there is required a pitot tube, a differential draft gauge and a thermometer, or pyrometer. A suitable location on the flue as regards uniform gas flow and convenience in setting up the equipment is often difficult to find. It is desirable to make the measurements at a point in a straight run of flue at least four diameters, or the equivalent, from the last bend or obstruction or junction of other flues. However, many very satisfactory measurements have been made in much shorter distances and a rapid preliminary survey of a section will often show more uniform flow than could be expected from external appearances. Even in cases where the flow is not as uniform as could be desired, a few extra points of velocity determination will serve to give a satisfactory average velocity for the whole flue section. The cross sectional area of the flue section should be determined from measurements made on the flue itself, not relying on drawings of the flue, and the contour of settled dust on the bottom of the flue is to be noted so as to obtain a true cross sectional area

If the flue is large and rectangular, it is usually more convenient to provide three or four holes through which the pitot tube may be inserted to face the gas stream. The points of the traverse should, of course, be approximately at the centers of equal areas and it is evident that the final average velocity calculated for the section will be strengthened by a larger number of individual velocity determinations. A system of marking the depths of insertion on the pitot tube is easily arranged for the various points.

The calculation of velocity is to be made from the velocity head as read on the differential gauge and the temperature by the formula:

$$V = 3.9 \sqrt{\frac{29.9}{P} \times \frac{1.0}{D} \times H \times T}$$

When: V = gas velocity in feet per second.
H = velocity head in inches of water.
T = Temperature in degrees C absolute.
P = Gas pressure in inches Hg.
D = Spec. gr. of gas referred to air.

At sea level with the gas pressure equal to 29.9 inches of mercury and with gas having a density equal to that of air, the above becomes: $V = 3.9\sqrt{H \times T}$.

In practice very few cases are found where the specific gravity of the gas differs appreciably from that of air since there is usually sufficient water vapor present to offset the heavier gases.

In paper plants where it may be impractical to make pitot tube measurements of the recovery furnace gases, an approximation of the gas volume may be made from the rate of combustion of carbon and the carbon dioxide and water vapor content of the flue gas.

Now while the quantity of sodium oxide input to the furnaces is usually unknown, in this approximation it is assumed that the black liquor carries all of the sodium salts charged to the digesters. Then the analysis of the liquor for sodium oxide and organic carbon will give figures from which the average rate of carbon combustion may be calculated. This figure will obviously be high by the percentage that the washing losses, etc., represent of the actual sodium salts fed to the furnaces. In many cases approximations of these losses may be available.

On this basis then, the ratio of sodium salts in the black liquor having been determined by analysis, the average rate of flow may be conveniently expressed in pounds per minute. Then from the organic carbon content of the liquor the rate of carbon combusion, and production of carbon dioxide is calculated, which together with the carbon dioxide analysis of the flue gas determine the dry gas volume. To this should be added the volume of water vapor carried by these gases to obtain the total volume.

A filtration test to determine the concentration of soda per cubic foot will then determine the total loss.

Concentration of Solids

The determination of concentration of solids carried by the gas merely consists of drawing a metered volume of gas from the flue, passing it through a suitable filter and weighing the solids caught on the filter.

With these figures of metered volume and filtered weight at hand, the concentration or weight of solids per unit volume is at once available.

The concentration of solids is usually expressed, in this country, as milligrams or grains per cubic foot.

A wide variety of equipment may be used in making such a determination, but for convenience and ease of assembly, the following is recommended:

A gas meter capable of operating under a vacuum of five inches of mercury, equipped with proper index dials; a thermometer and mercury manometer arranged to indicate the temperature and pressure of the gas as it is metered. A filter thimble holder, a supply of filter thimbles, a sample tube, and a small vacuum pump, or an ejector, for operation on compressed air. In addition to this, if the gas to be sampled has a dew point

*Presented at fall meeting Pacific Coast Section of TAPPI, Tacoma, Wash. Oct. 5, 1929.

[1] Western Precipitation Company, Los Angeles, California.

that is likely to be reached in the metering, some form of condenser will be necessary to collect the condensate ahead of the meter.

The sampling tube, usually most conveniently formed from a piece of one-half inch pipe, is threaded into the thimble holder.

Next in the set up comes the condenser, if it is to be used, and following this is the gas meter equipped with the thermometer and manometer. The meter is connected to the aspirator through a regulating valve to control the rate of sampling and the pressure on the meter. As the sampling goes on and the filter becomes filled with solids, more and more pressure will be needed to maintain the rate of metering selected.

Metering Rate

In paper mill work, where the solids of interest consist of fume, the particle size is so small as to virtually behave like a gas, the rate of metering is of minor importance. In other cases where a mixture of fume and dust particles are present, the metering rate must be adjusted to maintain the velocity of the gas entering the sample tube the same as the flue gas velocity at that point, in order to obtain a representative sample of the total solids. This rate is readily calculated from the temperature and pressure in the flue and at the meter, together with the flue gas velocity and the area of the sampling tip. However, if water vapor has condensed out of the sampled volume ahead of the meter, the calculation is erroneous and a trial run is to be first made to determine the quantity of condensable vapor present.

In reference to the readiness with which fume particles enter a sampling tube, tests were conducted a few years ago at one of the smelters on a fume laden gas to check this particular point. Samples were drawn from the flue at velocities varying widely both above and below the flue gas velocity without effecting the results. Finally the sample tube itself was turned about so as to face down stream, requiring the fume to reverse its direction of flow in order to enter the tube, but even this change did not affect the results.

It is of course understood that this applies only to fume and not to dust particles which may be relatively of enormous size as compared to fume particles.

Location of Sampling Point Within the Flue

Where the solid particles are fume, the exact point within the flue from which the sample is drawn is not important as the distribution of solids is quite uniform. The only precaution that should be taken is to have the tip of the sample tube well away from the walls to avoid the chance of salting the sample by material from the walls.

Time of Sampling

The sampling should be carried on over a period long enough to obtain a sample sufficient for subsequent analysis et cetera. Usually several grams should be obtained.

Data

During the sampling the following data should be taken: Time meter dial reading, meter temperature, meter pressure, stack temperature, stack velocity.

The readings should be taken at intervals frequent enough so their average will fairly represent the average conditions during the sampling.

Weighing the Sample

Since the filter thimbles used may change weight with changes in atmospheric humidity and also since the material collected may be hygroscopic, it is generally best to dry the thimbles in an oven and weigh them in a weighing bottle before and after the sampling in order to be sure of an accurate weight of the solids filtered from the gas.

Calculation

After the test is complete, the metered gas volume is calculated back from the average conditions of pressure and temperature at which it was metered to flue conditions. If water vapor has been condensed its volume has been recorded and this is able to be converted to its vapor volume at flue conditions. The total gas volume taken from the flue is then the sum of the two volumes. This total sampled volume and the weight of the filtered sample then determine the concentration of solids per cubic foot at flue conditions.

Gases of High Vapor Volume—Wet Filtration

Where the gases to be filtered contain a large percentage of water vapor, the dew point may be so high as to condense moisture in the thimble holder. To prevent this, the thimble holder itself is constructed so that it may be submerged in the flue provided the temperature in the flue is not so high as to harm the filter thimble by charring. It sometimes happens that in one position the thimble is wetted by condensation and charred in the other, but between the two some satisfactory arrangement is usually found. Where the solids are water soluble and it is found difficult to obtain the sample in dry form, a wet system of filtering may be employed in which a wet cotton filter is used. It is connected in the set up immediately following the condenser so that the condensate continually drips on the cotton filter to keep it wet. A thick plug of tightly packed wet cotton is an excellent filter but it must be kept wet and this condensate does. At the completion of such a test the quantity of condensate is measured so that it may later be calculated to its vapor volume at flue conditions.

The sample tube, and condenser with connections are then to be thoroughly washed, adding the wash water to the condensate already collected. The weight of solids in solution may then be determined by evaporating to dryness or other suitable means.

Conclusion

In conclusion it may be said that the system here described differs from others principally as to the quantity of gas filtered and therefore as to the size of the sample of solids obtained.

When a large quantity of gas is sampled the equipment becomes more cumbersome. A motor driven fan is used and the filter is made up of one or more large cloth bags of appropriate material. With such a set up the gas volume sampled is some times measured by a pitot tube in the sample line, or the volnme is not directly measured at all, but instead the velocity of gas entering the sample pipe is maintained at the velocity of the flue gas by balancing the static pressures of the two streams. This method requires that the sample be drawn from the flue at a point of average velocity. The sample so obtained will then be that portion of the total that the area of the sample tube bears to the total flue area.

Where two methods have been used together on the same flue, they have checked each other quite satisfactorily so that there is no preference between the two as to accuracy. The results to be obtained are probably correct within 5%. The gas meter method is preferred on account of its simplicity and compactness.

Paper Mill Employment

WASHINGTON, D. C., November 25, 1929.—There was a slight increase in employment in paper and pulp mills in September as compared with August, a slight decrease in wages and an increase in both employment and wages in the paper box industry according to the Bureau of Labor Statistics, Department of Labor.

The Bureau received reports from 208 paper and pulp mills which gave their August employment at 57,877 increasing in September to 57,964 an increase of 0.2 per cent. The payrolls in these same mills, on the other hand, decreased from $1,582,976 in August to $1,580,139 in September a decrease of 0.2 per cent.

Reports were also received by the Bureau from 186 paper box factories which gave their August employment at 19,616 increasing in September to 20,422 an increase of 4.1 per cent. Payrolls in these factories also increased from $447,957 in August to $480,626 in September, an increase of 7.3 per cent.

Care and Maintenance of Electrical Equipment in Paper Mills*

Because the electric motor has acquired a reputation for reliability and has substantiated its claims of robust construction, it is too readily assumed that once installed it requires no further attention beyond occasional oiling. Such a fallacy is often exploded, unfortunately to the detriment of the power user, for like any other piece of machinery the electric motor requires a certain amount of care and attention if the best is to be got out of it. Admittedly, it requires less care than almost any other form of prime mover, but its successful operation does depend upon attention being given to certain fundamental requirements—neglect may lead to serious trouble, if not to the loss of equipment. Information on this question is therefore important, and the following notes have been prepared for the assistance of those responsible for the installation, operation and maintenance of electric motors or generators in paper mills.

The Right Type of Motor

In order to get the best results from electric driving, it is necessary to install the right kind of motor. Group driving usually demands steady speed with a fair amount of overload capacity, but great power in starting is seldom required. On the other hand, elevators or hoists need considerable power in starting, but constant speed is not essential. Thus, where the duty demanded is continuous running, easy starting and constant speed, the standard squirrel cage induction type motor will be found suitable on alternating current circuits, or a standard shunt wound motor on direct current circuits. In the operation of cranes and hoists, however, there is intermittent running, heavy starting with speed decreasing as load increases, which calls for a slip ring type a.c. motor or a series wound d.c. motor. Where different speeds from the same motor are called for, then the variable speed a.c. or d.c. motor is applied.

Locating the Motor

In installing motors in the first place, and also in trying to determine the cause of some faulty operation, it is worth while to make sure that the motor is properly located. To ensure maximum life, a motor should not be put in a place where the installation is subject to such corrosive agencies as acid fumes, excess steam, heat, dripping water or oil. Any of these corrosives will eventually cause installation failure with a regular motor. The ideal spot is a place where the motor can be readily inspected, easily cleaned, where the temperature is never above 100 deg. F., and where grit and dirt is not likely to accumulate. It is always advisable to have good ventilation in order to keep the motor cool.

If, however, a motor must be installed where it will come in contact with certain corrosive agencies, care should be taken to use a motor that is especially equipped to combat the trouble, such as pipe-ventilated motors or drip-proof motors, or those specially insulated against moisture or corrosive gas. Even totally enclosed motors are sometimes necessary.

Bearings perform one of the most important functions of the motors. A little care at regular intervals to see that they have proper lubrication will often show a big saving. Motor bearings are so designed as to operate for 1,000 hours' continuous running. It is still recommended that they be regularly oiled at least every 90 days with a good grade of medium weight mineral oil only. Lard, cotton seed, olive oil, or other lubricants of that nature, should never be used.

Ball bearing motors should be greased sparingly. An excess amount of grease in the ball bearings is equally as harmful as too little, and will cause the bearings to run hot. To prevent this there is no grease cup supplied with some motors. Ordinary cup greases should never be used on ball bearings, as most of them have a corrosive action on the ball bearings, which eventually destroy them with continual usage. Foreign matter in the grease is disastrous. Any ball bearing grease supplied by a reputable concern will be satisfactory.

General Care and Maintenance

Systematic inspection at least once a week is necessary to insure the best operation of motors and generators and the following points should be given special consideration.

Both the exterior and the interior of the machine should be kept free from water, oil, dirt, or grease. A vacuum cleaner is recommended for cleaning assembled machines. The use of compressed air is not always to be recommended on assembled a.c. motors. It is especially objectionable on machines installed in locations where there is much dust or metallic chips, as the compressed air may drive the dirt into the windings and cause a breakdown. However, as a general rule, the use of compressed air and a vacuum cleaner both might be advisable, as the loose particles could be gathered up with the vacuum.

Commutators

The commutator should always be kept clean and well polished. A glossy brown commutator indicates that it requires no attention. Under normal operating conditions the commutator will require only occasional cleaning with a piece of canvas or non-linting material.

No vaseline or oil of any description should be used on a commutator. If the commutator becomes burned, badly discolored or very rough, it should be cleaned or ground. Some manufacturers recommend the use of sandpaper, while others recommend the use of sandstone. Either will prove satisfactory. Emery paper or emery cloth should never be used with any commutator or brushes. A piece of sandpaper may be held with a flat block of wood against the commutator while the motor is running, so that the insulation between the commutator bars may be cut down to a level with the bars. If possible, it would be worth while to have the block of wood shaped with the same radius as the commutator. If sandstone is to be used it should also be curved in the same way. In both cases the commutator should be run at a high rate of speed during polishing and the sandstone or sandpaper moved back or forth along the surface parallel to the shaft. The commutator and brush faces should then be carefully cleaned and remove any grit which might cut or scratch the commutator.

For extreme roughness or eccentricity of the commutator, turning or special grinding is about the only satisfactory method. If turning is necessary, wasteful cuts should be avoided, and the tool should be set below the centre line so that the commutator cannot be damaged by gouging. With any grinding device the best results are obtained by using wheels or stones especially made for use on commutators, as ordinary stones usually pick up copper and become useless in a very short time. As copper dust will find its way through surprisingly small cracks and crevices, the space between the commutator necks must be stuffed tightly with cheesecloth, or use may be made of a circular cardboard shield attached to them. All brushes should be lifted during these operations.

Most commutators are under-cut at the factory, but after turn-

* Paper Maker and British Paper Trade Journal.

ing or grinding the slotting must obviously be renewed. This can be done with various types of home-made scrapers and saws if a special one is not at hand. The slots should be about 1/16th inch deep, and the edges of the bars should be rounded. In operation afterwards, care must be taken that the grooves do not become filled with conducting dust. For high speed machines, this is a remote contingency, but on slow speed units it may be necessary to clean the slot periodically with a stiff brush or fibre scraper.

The mica between the bars sometimes rots out in spots, usually because of excess oil. These holes, unless repaired, grow rapidly larger and may ultimately cause a serious short circuit. This mica should be carefully dug out and the cavity filled with good commutator cement.

Care of the Brushes

The brushes should move freely in the brush-holders, but still fit strongly enough to make good contact, and should press rather firmly on the commutator at all times. If the brushes stick in the holders, as they usually do with the accumulation of dirt and oil, these parts should be inspected regularly. Care should be taken to see that brushes do not become too short, as they should have plenty of bearing surface in the holder. The brush tension should be about 1¼ pounds per square inch. The failure of one brush to function often results in the failure of the other brushes due to overloading and overheating of the brushes in operation. It should be remembered that more brush pressure than is necessary tends to shorten the life of both brush and commutator.

Fitting Brushes

When replacing brushes they should be fitted by means of fine sandpaper folded around the commutator and the rotor revolved by hand in the desired direction until the proper fit is obtained. On some machines the sandpaper can be held in place if it is bent to a width slightly narrower than the commutator. The front end of this is inserted into one of the narrow slots between the commutator bars (where the mica has been undercut), and then folded back around the commutator by slowly revolving the armature by hand until the paper moves under a set of brushes. An operator should never shift the position of the brushes unless he knows positively that the brush position is incorrect, or it is desired to change the direction.

Lubrication of Brushes

The use of brush lubricant is practically forbidden on modern machines. It is claimed that this is unnecessary because of the brush materials used, and also that it may start a cutting action or have other serious effects. Sparking of the brushes does not necessarily mean that there is something at fault with the brushes. The most satisfactory position, of course, is when the commutator or brushes are all designed as a unit. Changes in compensation, in brush quality or in other designs and characteristics should be made only after it is certain that the fault does not lie elsewhere.

Sparking

As sparking is one of the most frequently encountered troubles, the following outline will be helpful, as it shows the order of the probabilities the most common causes of sparking:—

Operating Conditions.—(1) Overload; (2) under-voltage; (3) wrong speed; (4) vibration.

Commutator Trouble.—(1) Dirt on the surface or in slots; (2) high mica; (3) high or loose bars; (4) eccentricity; (5) badly grooved; (6) rough.

Brush Troubles.—(1) Stuck in holders; (2) poor fit on the commutator or in the holders; (3) spring tension wrong; (4) worn too short; (5) clipped or burned surfaces; (6) shunts not all attached properly; (7) wrong position or wrong spacing.

An open circuited coil will cause a ring of fire all around the armature and burned spot between the bars leading to the open coil. Other faults might be—a ground on the armature field; or inter-pole coil shifted or partly shorted; or the inter-pole windings reversed. This will cause violent sparking and probably a flash-over.

Nearly all motor troubles can be avoided with a few minutes' work and a little care. Some of the chief reasons for trouble might be classified as follows:—

(a) Meddling with the brushes and other adjustments by incompetent persons.

(b) Dirt or grit collected in the working parts.

(c) Continuous overloading of the motor beyond that for which it is designed. A continuous duty motor will usually carry momentary loads as high as 50 per cent above its normal rating, but this should not be continued for too long a time.

(d) Excessive vibration—generally traceable to loose bolts or poor foundation.

(e) Worn bearings and brushes.

(f) Using bearings material, oils, brushes, etc., other than those recommended by the maker. They have probably spent thousands of pounds in finding out what is best for that particular type of motor, so that it is not worth while to experiment too much.

(g) Not enough oil in the bearings, usually caused by dirt in the oil wells, oil rings sticking, leaks from the drain-cocks, etc. The oil wells should be washed out with kerosene, drained thoroughly and refilled with clean oil about once every month.

One word of advice well worth remembering more than anything else, and which, in the long run, will repay for the trouble, is to have a systematic inspection of each motor at least once a week. "Prevention is always better than cure."

Guesswork is a poor tool to use in solving troubles of any kind in motors or elsewhere, and, therefore, when such defects present themselves and call for an effective remedy, the first step is to determine the cause by a systematic checking up of the conditions.

New TAPPI Members

I. H. Andrews, chief chemist, Powell River Company, Powell River, B. C.

E. A. Charlton, vice-president, International Paper Company, 100 East 42nd street, New York, N. Y.

James d'A. Clark, technical assistant manager, Bowater's Paper Mills Ltd., Northfleet, Kent, England.

H. B. Collins, manager of manufacturing, National Cellulose Corporation, Baldwinsville, N. Y.

Arthur Gayler, director, Maschinenfabrik zum Bruderhaus, Reutlingen, Germany.

Rudolf Haas, consulting engineer, Zellstofffabrik Waldhof, Mannheim-Waldhof, Germany.

A. P. Hunneman Jr., chemist, Container Corporation of America, 111 West Washington street, Chicago, Ill.

A. I. Macnaughton, works manager, John Dickinson & Co., Ltd., Croxley Mills, Watford, Herts, England.

A. F. McCoy, chemist, A. P. W. Paper Company, Albany, N. Y.

Vaino Nissinen, chief chemist, International Paper Company, Bastrop, La.

R. A. Sipes, superintendent of sulphite mill, Shaffer Box Company, Tacoma, Wash.

P. F. Solheim, assistant superintendent, Dells Paper and Pulp Company, Eau Claire, Wis.

N. L. Stables, day foreman, British Columbia Pulp and Paper Company, Port Alice, B. C.

Gerald Strecker, engineer, care Otto C. Strecker, Olbrichweg 6, Darmdstadt, Germany.

Herman Wenzl, chief chemist, Felix Schoeller Jr. Paper Mills, Osnabruck, Germany.

Appointed Southern Sales Agent

David L. Mackay has been appointed southern sales agent for Hungerford & Terry, Inc., and the Inversand Company, Clayton, N. J., engineers and manufacturers of water purification plants, Hungerford filters, Inversand water softeners, base exchange silicates and Basex, etc.

Influence of Size and Alum on Coloring of Paper in the Beater With Aniline Dyestuffs

By P. W. Carr[1]

This subject is such a broad one that very little detail can be brought into an article of this length. Consequently, the writer will confine himself in the main to the more general phases of the situation.

There are, of course, in the realm of paper-making three important classes of dyestuffs—namely, basic, acid, and direct. Chrome sulphur and all other classes occur infrequently or not at all, as the case may be, so we will omit them from consideration. The effects of size and alum on the three main classes mentioned above vary considerably. Let us first discuss the basic dyes, this group including, of course, such colors as National safranine AP, National rhodamine BP, National chrysoidine YP, National auramine OP, National victoria green WBP, National methylene blue 2BP, and National methyl violet 2BP.

Any color in the above group may be beater-dyed on a fifty-fifty mixture of groundwood and unbleached sulphite in four different formulas:—(A) Stock and color, (B) Stock, color, and size, (C) Stock, color, and alum, (D) Stock, color, size and alum.

In most cases the resultant shades produced, assuming constant percentages of dyeings, are very similar in strength and brightness for each color. For example, if a two and one-half pound dyeing were made by each of the above formulæ, using National methylene blue 2BP, the four results are quite close. That produced by formula (B) is, in most cases, slightly weaker than (C) and (D), and also varies most in shade, due, unquestionably, to the effect of the alkaline reaction. In the case of National chrysoidine YP, the weakness of yellowness of result (B) is very noticeable. So, in emergency, a passable result on groundwood and sulphite papers might be obtained by omitting either the size or the alum (or both, in great emergency) when using basic colors. On the other hand, the minimum of bleeding the greatest color economy is secured by using both. Alum forms with these colors a sort of lake. If size is also used, an even more permanent precipitate is formed and the best possible result is obtained. Basic colors are used in connection with furnishes of other unbleached pulps, notably kraft pulp.

Alkalinity Cannot Be Evaded

In such cases it is considered advisable to use both size and alum. Unbleached sulphate pulp has inevitably some alkalinity, no matter how carefully washed, and the sensitiveness of basic dyes to alkali makes the use of alum logical to get the best results in coloring such a sheet. Other considerations, such as waterproofing, "snap," etc., making sizing necessary, so that we have, as a rule, no option in coloring kraft papers but using both size and alum, and, as pointed out above, the result from a colorist's point of view should be most successful.

In all the foregoing we have considered unbleached pulp furnishes. Basic colors naturally have their maximum application there. Occasionally, however, they are used with bleached pulps. Here, the same conditions do not apply. Whereas the resinous material not wholly, or in some cases not at all, removed from the unbleached fibres acts as a mordant or assistant in the dyeing process, such resins and wood acids are in general absent from the bleached stock. Here, then, we find it compulsory in the interests of non-bleeding, economical color formulæ to use alum, and still better, size and alum.

[1] Member TAPPI, National Aniline & Chemical Co., Boston, Mass.

The use of the acid colors is quite different. This group, of course, includes such items as National croceine scarlet MOOP, National metanil yellow P conc., National quinoline yellow P conc., National acid orange YP, National alizarine sapphire, and National acid violet 4BNP.

Should we repeat the tests outlined in the basic color discussion, we might easily be shocked to find that in tests (A) and (B) the amount of color adhering to the sheet was almost nil. In short, the color of itself appears to have no affinity whatsoever for the fibre, and the addition of size alone changes the situation in most cases not at all. On the other hand, the test (C), while it does show an improvement over (A) and (B), generally could be counted on to give us a resulting shade much weaker and duller than (D). To express it in a more homely way, the characteristic acid color is of such a composition that it has of itself no affinity for any ordinary paper-making fibre, bleached or unbleached, and must be "painted" or fastened on. The precipitate formed of size and alum seems to be the best means of doing the fastening. Let us emphasize again that this condition holds for any ordinary paper-making fiber.

Direct Group of Colors

Finally, we come to the direct group of colors, such types as National Erie scarlet 4BAP, National Erie fast orange AP, National brilliant paper yellow C, National Erie green MT, National Niagara sky blue 6BP, National Erie violet 2BP, and National Erie black GP.

Referring again to the series of tests outlined in the basic color section, we find that application of such tests to one of the direct group of dyes does not give us results representative of the group as a whole. For example, the direct blues show us much greater strength of shade in tests (C) and (D), whereas many of them also show great shade changes in test (C). For example, some of the Solantine blues, National Erie violet 2BP, etc., go very red with a great excess of alum. National Erie fast brown 3RBP, on the other hand, follows the rule of basic colors very closely, as do some of the other colors on the red end of the spectrum. As a consequence it is fairly important to determine just how such a color is to be dyed, *i.e., precipitated* with salt, size, alum, or size and alum, before suggesting it as a component in any given shade.

Whereas we have considered the use of size and alum in the foregoing discussion as indicating their use in quantities bearing the ordinary relation to one another, *i.e.*, an excess of alum over size, say in proportion of 2½ to 2, we find two colors commonly used in the direct group which make careful supervision of the chemical condition of the beater very important. The writer refers to National Erie benzo 4BP, commonly used in Christmas reds, and National brilliant paper yellow C, a commonly used color in bond mills. National Erie Benzo 4BP goes over to a very muddy reddish gray with too great an excess of alum. Consequently, it is customary to reach a chemical balance with soda ash used in conjunction with the size and alum. In the case of the yellow, it turns blood-red with excess of size. On this account the excess of alum must be very carefully maintained.

Color economy in this class of dyeing is not greatly enhanced by the use of size. Salt or alum may be used to precipitate the colors on the fibers. In some cases, too, the beater is heated in an effort to complete exhaustion. Either size or alum, or alum alone, will help insure fastness in bleeding.

Current Paper Trade Literature

Abstracts of Articles and Notes of Papermaking Inventions Compiled by the Committee on Abstracts of Literature of the Technical Association of the Pulp and Paper Industry

Clarence J. West, Chairman

Raw Materials

Recording the History of Pulpwood. C. C. Heritage and W. H. Monsson, U. S. Forest Products Lab., Madison, Wis. Paper Tr. J. 87, No. 18, 52-55 (Nov. 1, 1928).—Various available descriptive and testing procedures have been selected and organized into a tentative scheme for evaluating pulpwood as a preliminary step necessary to the correlation of the properties of the wood with pulping variables and pulp quality. This tentative scheme which is subject to change as experience may dictate, is in force at the U. S. Forest Prod. Lab. and is published to permit other establishments to examine it and to criticize it or to adopt it if such action seems desirable. The procedure comprises: (1) identification of species, (2) description of forest and growth data, (3) description of pulpwood, (4) commercial evaluation, (5) technical evaluation.—A. P.-C.

Microstructure of a Woodpulp Fiber. George J. Ritter and G. H. Chidester, U. S. Forest Prod. Lab., Madison, Wis. Paper Tr. J. 87, No. 17, 131-137 (Oct. 25, 1928). —The location in the wood of the two forms of lignin is described, and the two forms are shown in photomicrographs. The possibility of obtaining a yield of 60% of lignin-free fibers for papermaking is suggested. The cell wall of wood fibers is composed of several layers, which can be separated by chemical means. The layers in the cell wall of a wood fiber can be separated into fibrils by chemical means. The fibrils in the outer layer are oriented at approximately right angles to the fiber's axis, while those in the remaining layers are from 0° to 30° thereto. The fibrils can be separated into regularly shaped "fusiform bodies" with optical properties similar to those of the fibrils. When either lignified or delignified wood fibers are treated with swelling reagents, the fiber walls thicken outwardly and also inwardly. The polygonal shape of the cross section of undelignified fibers is unaltered, but the cross section of delignified fibers is limited by the outer layer of fibrils which are oriented at 90° to the fiber's axis. The optical phenomenon, when bordered pits are observed btween Nicol prisms, is explained on the basis of the ring-like structural arrangements of the cellulosic material of the cell wall. The effect of phosphoric acid on pulp obtained from two series of cooks of spruce and hemlock is described. Its effect is more severe on the pulps from the more drastic cooks, both in the raw and refined condition. The effect increases as the period of milling increases. The swelling and dissecting action of the phosphoric acid on the fibers is explained on the assumption that part of the outer layer and more of the binding material between the fibrils in the various layers of the cell wall are removed by the more drastic cooking conditions. Milling has the mechanical effect of progressively rupturing the outer layer of fibrils and loosening the inner fibrils. Such an effect permits a more rapid attack by the phosphoric acid. It is suggested that the phosphoric acid treatment developed in the study discussed in the article may be further standardized to provide a new method for the evaluation of pulp quality.—A. P.-C.

Composition of Japanese Bamboo. Y. Ueda, K. Kasama and K. Kimura. Cellulose Industry (Tokyo) 4, 95-98 (1928).—Three samples of Japanese bamboo ("Moso-Chiku"), 1, 3 and 5 yrs. old, respectively, contained: water 9.30, 8.11, 8.06 per cent; alcohol and benzene extract 2.39, 3.04, 3.02 per cent; cellulose 41.56, 42.71, 42.64 per cent; pentosans 24.07, 24.36, 24.51 per cent; respectively. The pulp obtained yielded 4.11 per cent furfural, had a copper number of 0.75, and contained 78.92 per cent alpha-cellulose, 17.91 per cent beta-cellulose and 3.7 per cent gamma-cellulose. By acetylosis by Klein's method a 25 per cent yield of cellobiose octaacetate was obtained; sulpholysis by Monier-Wailliams' method gave 80 per cent glucose and hydrolysis with 7 per cent sulphuric acid for 5 hrs. gave crystalline xylose.—A. P.-C.

"Kaoliang" Stalk as a Papermaking Material. R. Yamamoto. Cellulose Industry (Tokyo) 4, 53-66 (1928).—Kaoliang (*Andropogon sorghum* Broth) produced in Manchuria was steamed and cooked with caustic soda to obtain easy bleaching pulp. Optimum conditions were heating with 10 parts of water to 100° to 120° C. for 30 to 60 minutes, and then with 12 per cent caustic soda (on the wet weight of the raw material) at 130° to 140° C. for 3 to 4 hrs. The stalk gave best results, the leaves and knots giving a smaller yield of pulp which was difficult to bleach. No pulp could be obtained from the pith alone. Brownish pulp was obtained in 40 per cent yield. which was reduced to 36 per cent on bleaching.—A. P.-C.

Pulp From Waste Paper. L. Grenaudier. Eng. pat. 282,829, Dec. 30, 1926.—In a modification of the process described in Eng. pat. 279,516, ink is removed through the formation of an insoluble scum by treating the pulp of the paper which is to be deinked with a very weak sodium carbonate solution (suitably a 0.125 per cent solution), heating and agitating and if necessary adding a metal salt to form an insoluble soap or to effect salting out. Some soluble soap may be added as may also gelatin, albumin, casein, glucose and loading or bleaching agents.—A. P. C.

Paper Deinking Process. A. R. Lukens assignor to the Richardson Company. U. S. pat. 1,680,949, Aug. 14, 1928.—A fibrous pulp such as that formed from printed paper is soaked in alkaline solution such as sodium carbonate solution in presence of a sodium sulphonate or other suitable sulphonic acid compound and the pulp is washed with water without the use of further addition of soap or fatty acid.—A. P. C.

Sulphite Process

Sulphite Liquor. G. A. Richter assignor to Brown Co. Can. pat. 281,949, July 24, 1928.—A composite cooking liquor for the production of high grade sulphite pulp contains 1 per cent combined sulphur dioxide in the form of calcium bisulphite, about 1 per cent combined sulphur dioxide in the form of sodium bisulphite and about 5 per cent of free sulphur dioxide.—A. P. C.

Sulphite Pulping Process. R. Pictet and F. Tharaldsen. Can. pat. 279,430, Apr. 17, 1928.—Cellulose is produced by treating wood, etc., under pressures above 8 atmospheres and at a temperature of not over 110° C., with highly concentrated aqueous solutions of sulphurous acid containing more than 100 g. of sulphur dioxide per liter.—A. P. C.

Wood Pulping Process. G. A. Richter assignor to Brown Co., Can. pat. 276,817, Jan. 3, 1928.—Wood chips are soaked in a solution containing about 20 per cent of sodium sulphite and are then cooked under pressure at an elevated temperature in an acid sulphite solution of much lower combined sulphur dioxide content.—A. P. C.

Manufacture of Sulphite Pulp. A. G. Natwick, Lincoln Mills, Merritton, Ont. Paper Mill 51, No. 43, 12, 14, 43 (Oct. 27 1928).—A brief discussion of a few developments which exemplify the modern trend of progress in sulphite manufacture.—A. P. C.

Acid Proportioning and Control System for Sulphite Mills. C. O. Sisler. U. S. pat. 1,671,656, May 29, 1928.—The side and top reliefs of the digesters are connected to a pipe terminating in a nozzle in the throat of an ejector located in the acid line

between the acid storage tank and the pump by means of which the digesters are filled with acid. When a digester is being filled while another one is being relieved, the relief is sent to the ejector where it meets the acid from storage and the two are intimately mixed in the impeller of the pump. By regulating the opening of the valve in the acid line between the storage tank and the ejector, the mixture of storage acid and relief gas and liquor may be proportioned so as to obtain the desired temperature and strength of cooking liquor sent to the digester. With this arrangement considerable heat is conserved, which would otherwise be lost in the cooling water were the relief gas and liquor sent to the relief coolers.—A. P. C.

Method and Apparatus for the Continuous Cooking of Fibrous Material. T. L. Dunbar assignor to Chemipulp Process Inc. U. S. pat. 1,679,336, July 31, 1928.—The chips to be digested are continuously fed in measured quantities through a drum valve into the upper end of a precooking tower filled with fresh acid liquor. The chip valve is constructed so as to feed the chips into the tower without materially affecting the pressure therein. Steam is admitted to the bottom of the tower and sulphur dioxide relieved from the top and absorbed in fresh acid. Part of the liquor is drained from the bottom, put through a separator to remove the gas and entrained volatile matter from the wood, and the purified partly used liquor reused in the precooking tower. From the latter the chips are passed through a series of cooking chambers into which they are forced either by means of drum valves or worm conveyors. Steam is introduced at the bottom of each chamber and gas is relieved at the top. Fresh liquor may also be introduced, and in that case a corresponding amount of liquor is removed at the bottom and, after passing through a separator, may be reused. The pulp is discharged from the last chamber of the digester through a filter press or screw press washer which tends to squeeze the liquor out of the pulp.—A. P. C.

Sulphite Waste Liquors

Process for Mfg. a Pulverulent Non-Hygroscopic Product From Pulp Waste Liquors. I. G. Farben. Industrie. A. G. Fr. pat. 614,483, Sept. 20, 1926.—A pulverulent, non-hygroscopic product, which is stable when exposed to the atmosphere, is produced by evaporation of the waste liquor at temperatures above 100° C. In a modification the liquor is subjected to temperatures above 100° C. before evaporation. In another modification solid products obtained from pulp waste liquors in any suitable manner are subjected to high temperatures.—A. P. C.

Utilizing Sulphite Waste Liquor for the Production of Yeast. G. O. W. Heijenskjöld assignor to Aktiebolaget Bästa. U. S. pat. 1,680,043, Aug. 7, 1928.—An apparatus and process are described in which sulphite waste liquor is neutralized to "at least the neutral point," filtered and then added together with other desired nutrient substances for yeast to a wort of high sugar concentration in which yeast is being propagated with aeration.—A. P. C.

New Derivatives of Ligninsulphonic Acid. H. Adams and A. Shepherdson. Can. pat. 279,809, May 1, 1928.—New derivatives of ligninsulphonic acid (sulphite pitch) are manufactured by treating the acid at an elevated temperature with caustic soda followed by an acidifying treatment.—A. P. C.

Ligninsulphonic Acid. J. Baddiley and A. J. Hailwood. Can. pat. 280,152, May 15, 1928.—New, technically valuable products are manufactured by the moderated oxidation of sulphite pitch with nitric acid.—A. P. C.

Alkaline Processes

High Alpha Cellulose Pulp. G. A. Richter and M. D. Schur assignors to Brown Company, Can. pat. 278,538, Mar. 13, 1928.—An alkaline digesting liquor is mixed with an aqueous suspension of chemical wood pulp of a predetermined consistency, and such mixture is thickened to a predetermined consistency, the pulp then being digested in the alkaline liquor.—A. P. C.

High Alpha Cellulose Fiber. G. A. Richter assignor to Brown Company, Can. pat. 278,540, Mar. 13, 1928. U. S. pat. 1,678,230, July 24, 1928.—Predigested pulp is digested in an alkaline liquor containing sodium compounds recovered from the spent liquor resulting from the digestion of raw cellulosic material in the production of pulp together with the spent liquor resulting from the digestion of predigested pulp with alkaline liquor.—A. P. C.

High Alpha-Cellulose Fiber. G. A. Richter assignor to Brown Company, Can. pat. 278,541, Mar. 13, 1928. Predigested pulp is digested with an alkaline liqour, the spent liquor is mixed with waste liquor from the kraft process and soda is recovered from the mixed spent liquors.—A. P. C.

High Alpha-Cellulose Fiber. G. A. Richter assignor to Brown Company, Can. pat. 278,543, Mar. 13, 1928.—Raw pulp is digested at a relatively low temperature in a liquor containing an alkali and an oxidizing agent, and the pulp is then digested in an alkaline liquor at elevated temperature.—A. P. C.

High Alpha-Cellulose Fiber. G. A. Richter assignor to Brown Company, Can. pat. 278,544, Mar. 13, 1928. Pulp is treated with a caustic soda solution at a temperature considerably below 212 deg. F. the caustic soda being present in an amount sufficient to render soluble a substantial proportion of the less resistant celluloses, ligneous and other coloring substances, but insufficient to cause mercerization of the alpha-cellulose content.—A. P. C.

Cellulose Rich in Alpha-Cellulose. Brown Company. Eng. pat. 278,767, Apr. 13, 1926.—Bisulphite pulp is treated with caustic soda or other alkali to effect purification without mercerization and obtain a product suitable for making cellulose esters or ethers or for making high grade paper.—A. P. C.

Wood Pulping Process. F. G. Rawling. U. S. pat. 1,679,682, Aug. 7, 1928.—Wood chips are treated with an aqueous solution of sodium sulphite and sodium bicarbonate or other suitable sodium salt of a weakly ionized polybasic acid, at a temperature 100 deg. to 150 deg. C., unabsorbed liqour is removed from the wood and the latter is subsequently treated with sulphur dioxide at 100 deg. to 160 deg. C.—A. P. C.

Purified Paper Pulp. G. A. Richter and M. O. Schur assignors to Brown Company. U. S. pat. 1,683,262, Sept. 4, 1928.—Pulp such as that from wood is subjected to alternating chemical treatments and washing. Caustic soda solution, hypochlorite and chlorine may be employed for the chemical treatments and the wash water effluent from one washing is employed in another washing in which the contaminations present in the effluent do not interfere with the other treatments or damage the pulp.—A. P. C.

Technical Control in Soda Pulp Mills. E. S. Hinman, P. H. Glatfelter Co. Paper Ind. 10, 1195-1197 (Oct. 1928).—A general outline of factors requiring control, starting with the wood room and following the log through the process.—A. P. C.

Alkaline Pulp Mill Control Problems. C. K. Textor, Northwest Paper Company, Cloquet, Minn. Paper Tr. J. 87, No. 16, 37-38 (Oct. 18, 1928. Pulp & Paper 26, 1479-1480 Oct. 25, 1928).—A brief discussion of the importance of developing an adequate method for evaluating the pulp making qualities of pulpwood and the papermaking qualities of pulp.—A. P. C.

Treating "Talloel." A. Schultze & Co. assignor to Oel-und Fett-Chemie Gesellschaft, Eng. pat. 281,637, Dec. 4, 1926.—A low absolute pressure such as 4 mm. or less is used in the separation of "talloel" into industrial fatty acids and resinic acids by vacuum distillation, with or without steam. Fractionating columns are preferably used and the distillation is stopped when resinic acids begin to pass over.—A. P. C.

Investigation and Purification of Sulphate Turpentine. I. J. Postovski and V. G. Pljusnin. Ann. Inst. Polytechn. J. 6, 245-258. (1927).—The turpentine oil obtained in abundance in the manufacture of sulphate pulp may be readily purified from compounds which give precipitates with mercury salts (mercaptans and sulphides) by distillation in a current of steam. The first 15 per cent of the distillate contains 86 per cent of these sulphur compounds, and if 50 per cent of the oil is distilled only 2 per cent of the sulphur compounds remain. The purified sulphate

turpentine is a colorless liquid of characteristic, pleasant odor, of initial boiling point 153 deg. C. specific gravity at 15 deg. C. O. 8645, refractive index at 20 deg. C. 1.46728, specific rotatory power at 20 deg. C. &&& 14.47 deg. It contains 90 per cent alpha- and beta-pinene and not more than 1 per cent of dipentine, and is suitable for the preparation of paints and varnishes, and for pharmaceutical purposes.—A. P. C.

Plasting Composition containing paper Mill Sludge. A. E. Hansen and A. C. Ruger, U. S. pat. 1,668,961, May T, 1928—Paper mill sludge is used with rubber, plaster of Paris, etc. for making building boards and other products.—A. P. C.

Process for the Treatment of Soda and Sulphate Black Liquors. E. Hagglund. U. S. pat. 1,680,540, Aug. 14, 1928. The liquor is heated under pressure to precipitate the main portion of organic substances as carbonaceous and pitchy material; the liquor is separated from the precipitate, evaporated to dryness, and fractionally lixiviated to separate the acetate from the less soluble soda. The latter is afterwards causticized to obtain a liquor for further use. Before lixiviation, the dry residue may be heated to about 300 deg. C. to decompose organic substances other than acetate. Volatile products such as methanol may be recovered.—A. P. C.

Method of Pulping Wood. F. G. Rawling. U. S. pat. 1,673,089 June 12, 1928.—Wood chips are submerged in and heated with an aqueous solution of a normal sulphite and a salt of a weakly ionized polybasic acid at a temperature of 100° to 125° C., after which the chemical treating liquor is removed and the woody material is heated to a higher temperature.—A. P. C.

Bogalusa Paper Co. Research Laboratory

The accompanying photographs show the staff and experimental paper machine of the Bogalusa Paper Company at Bogalusa, La. This company, manufacturers of kraft pulp, paper and board is one of the leaders in applied research and has found it worth while to erect a separate and modern building to house its research activities.

Like many other up-to-date companies it follows the practice of segregating the research department from the testimonial control division. The laboratory houses the office of the general manager of the company, R. H. Laftman and also a bountiful library containing most of the books and other publications necessary for studying the history of any research project undertaken.

A valuable part of the laboratory is a constant humidity room which is maintained at a temperature of 70 deg. F. and a relative humidity of 65 per cent by means of a Carrier humidifying system and a York ice machine. The latter produces six hundred pounds of ice per day. In this room the paper's physical properties are tested.

Research Staff of Bogalusa Paper Co.

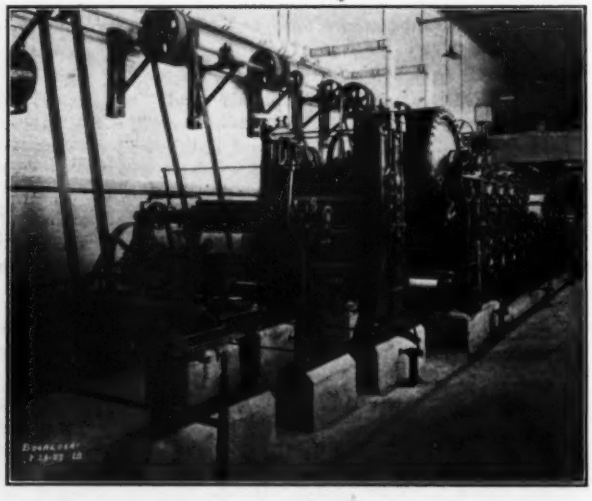
Left to right: E. Bache (sitting), chemical engineer; D. R. Burch, laboratory helper; H. Crowe, machine tender; Kurt Suter, chemist; S. L. Ditmes, secretary; R. H. Stevens, chief chemist; R. C. Woodridge, chemical engineer; R. H. Laftman, vice president, general manager and director of research; G. Nicholson, general superintendent; W. F. Herrin, laboratory helper; R. Crull, back tender; Edythe Busle, librarian; George Witham, boss machine tender.

Pulp testing is an important activity at the laboratory and it is equipped with a one pound Valley Iron Works beater, a 5 foot by 9 foot Allis-Chalmers rod mill, an International Equipment Company centrifuge, a Williams moisture testing oven, a Hymac hydraulic press, Valley sheet making equipment and a Green freeness tester.

The semi-commercial laboratory contains two Dilts 100 pound beaters, one Horne jordan, and a 39 inch Pusey & Jones combination fourdrinier and cylinder paper machine. This machine has a daily capacity of about four tons.

The experimental pulp mill is located in a separate building and contains a digester, two diffusers, stock chest, screen, thickener, and wet machine. The digester is of 125 cubic feet capacity and is operated at 125 pounds pressure, and may be handled as a stationary or rotary unit. The stock from the digesters is passed through a cyclone into one of two diffusers. From there it is dumped into a stock chest from which it is pumped to a six plate 33 cut Packer screen. It is then passed along to a thickener and from there to a 54 inch wet machine where it is collected in the form of laps. The lapped pulp is then delivered to the experimental paper mill and is worked up into specialties that are put on the paper market to test the demand.

Wet End of Experimental Paper Machine



Dry End of Experimental Paper Machine

Section of the

COST ASSOCIATION OF THE PAPER INDUSTRY

Affiliated with

THE AMERICAN PAPER AND PULP ASSOCIATION

Edited by
THOS. J. BURKE, C. A., Sec.-Treas.

The Development of Uniform Cost Accounting through Trade Associations*

Following luncheon the meeting was called to order by Thomas J. Burke, secretary-treasurer of the Cost Association of the Paper Industry, who acted as chairman. Mr. Burke spoke as follows:—

Gentlemen:—We have not much time to devote to what I consider to be one of the principal activities that should be carried on by a Trade Association today. To be exact, we have a little over an hour, so I shall not waste time in introductory remarks. I conceived the idea of having four short addresses on different aspects of this subject, namely: the Legal Viewpoint, the Association Viewpoint, the Members Viewpoint, the Accounting Viewpoint, of the Development of Uniform Cost Accounting Through Trade Associations.

I have asked Mr. Benjamin S. Kirsh, author of "Trade Associations—The Legal Aspects," to speak on the *"Legal Viewpoint"* of this subject, and take pleasure in introducing Mr. Kirsh:

"Legal Aspects"

BENJAMIN S. KIRSH—Gentlemen, it is a pleasure to me to have this opportunity of talking to you on the *"Legal Aspects"* of the Developments of Uniform Cost Accounting Methods Through Trade Associations. "I must be brief as time is limited, which I regret, as I agree with Mr. Burke that this should form an important part of Trade Association work, for there can be no doubt of the constructive value of cost accounting plans. Business executives are finding it increasingly necessary to rely upon facts and scientific methods instead of "guesstimates." The law, as well as economic and business thought, has already recognized the evils of over-production, wide price fluctuations and such unsound practices as the marketing of products at a price which bears no rational relation to the total cost. Uniform cost accounting as a trade association activity has a distinguished series of champions—Department of Commerce, Federal Trade Commission, Chamber of Commerce of the U. S., Department of Justice have all approved of this movement. In the Maple Flooring case the Supreme Court stated, "The cost of production is a legitimate subject of inquiry and knowledge in any industry." In fact, there is no opinion of the courts or the Federal Trade Commission which condems uniform cost accounting as being in conflict with the Anti-Trust Laws. It should be noted particularly however, that uniformity refers to the methods of cost accounting and not to predetermined or "fixed" elements of cost. A distinction must be drawn between uniform fundamental theory and cost accounting on the one hand, and uniform costs or items of cost on the other. The fact is, the drawing up of a uniform cost accounting plan is an educational service for the guidance of the individual member of an industry in determining his individual costs and profit margins. It is the gauge of the member for ascertaining his individual costs and comparing them with the costs of others in the same industry. Each member must always be free to determine his own costs, his own profit margin and his own sales prices, because the essential thought is, uniformity in principles and similarity in methods.

Sales Policies and Practices

From the point of view of the policy of the law in anti-trust matters, the subject matter of uniform cost accounting tends always to bear a more or less distinct relation to uniformity among competitive units in sales policies and practices. From this point of view, there is always the possibility of an approach to the area where the policy of the anti-trust laws limits and even forbids certain factors of accounting practice, which bear a direct and substantial relation to concerted price and production activity, by the industrial group. Statistical and cost accounting activities intersect at numerous points, and the Supreme Court in its latest decisions dealing with these matters, has taken a rather more favorable attitude, thereby permitting a more extensive area of operation. The fact that a uniform cost accounting plan contains possibilities of abuse or that price agreement among competitors within the industry may be rendered easier, because of the standardization of practices, cannot be relied upon as an absolute argument that such practices are illegal. The underlying purpose and the necessary result of a uniform cost accounting plan, will determine its lawfulness. It is only when it is being perverted and used as a cloak to hide a prohibited agreement, either expressed or implied, that such a plan must be deemed illegal in its entirety. As long as its main purpose is educational, there can be no legal objection to it. But the individual must deal with *his own actual costs* and not with any artificial uniform cost base. He must not follow theoretical or ideal standard production or distribution cost, nor use a fictitious market value for raw materials purchased at different prices, at different times. The correspondence between Harry M. Daugherty, then Attorney General and Herbert Hoover, then Secretary of Commerce, is enlightening on this subject. The Maple Flooring case decision reviewed the legal limits of uniform cost accounting, but this decision must be viewed in relation to problems involved other than uni-

* Session held at American Trade Association Executives Convention at Wawasee, Ind., September 27, 1929.

form cost accounting methods, particularly the statistical activities of the Maple Flooring Manufacturers Association; for while there may seem to be certain differences in emphasis or approach between the statistical activities of trade associations and their uniform cost accounting methods, in many respects the facts intersect and analogies can be drawn from both. I have not the time to go into this case more fully, but a careful reading thereof will be helpful to any Secretary interested in this subject.

Remember, that while a trade association may afford facilities for education in the use of correct accounting procedure, the individual member must never be *compelled* by pressure from the association or its officers, to conform to group activity.

Significant Features

I will conclude by listing the significant features which have been noted by the courts, so that proper precautions can be taken and the cause for dissatisfaction removed.

1—Cost data must be accurate and the figures based on actual and not on fictitious or arbitrary information.

2—There must be no recommendation, advice, comment or criticisms with respect to the amount of any item of cost, rate of profit, or selling price to be set by the individual member.

3—Cost information must be essentially educational and informative in character. The use of the cost accounting data is a matter for individual choice, although the group may be educated in proper methods of cost accounting.

4—Cost information should be published or made available to those not within the ranks of the association, so that all appearance of secrecy and the possibility of distortion of the information for unlawful purposes may be lessened.

5—Cost data must be disseminated in such a manner, that the information contributed by individual concerns is *not* identified by name. The general policy of the law is to forbid the identification of each report, which would afford the members an opportunity to detect those not conforming to a preconceived concerted arrangement to violate the Anti-Trust Laws. To refrain from such identification is a safeguard which it would be wise to follow, as the law stands today.

6—There should be no penal provision compelling group action as distinguished from free and uncontrolled individual discretion with respect to cost, margin or selling price.

7—Drastic supervision, employed to spy upon the activities of a member to discover whether or not he is conforming with the group plan, should be avoided.

Co-operative efforts on the part of trade associations seeking a more efficient, improved, and more serviceable technique will be judged by the law when pursued within the proper limits, with a view to enlarging the permissible area of operation. This seems a fair prophecy, now that the principle of uniform cost accounting has been accepted by the courts as a sound, legal, as well as economic function

CHAIRMAN BURKE: I am sure you will agree that Mr. Kirsh has rendered all of us a definite service in thus stating in a comparatively short address, the legal prohibitions we must bear in mind in our efforts to promote the use of uniform cost accounting in our Trade Association.

There are several points I would like to take up, but unfortunately the time allowed will not permit me to do this. I will therefore, call on Mr. William E. Fitch, Vice-Prsident and General Manager of the Laundryowners Association of the United States and Canada, who has very kindly consented to say a few words on the *"Association Viewpoint,"* of this subject.

Standard System in Laundry Industry

WILLIAM E. FITCH: Mr. Chairman and Gentlemen: I know of no one thing that our association has done that has had a more far-reaching effect on the upbuilding of our industry on a solid foundation than has the development and distribution of our standard system of cost accounting for the laundry industry.

The system was designed on what we consider sound cost accounting principles, having in mind at all times the particular accounting needs of our industry. The system was designed to meet the needs of the smallest as well as the largest laundry, the Simplified System applying to the smaller group of laundries and the primary system meeting the needs of the medium sized and larger laundries.

The operating statement, which is taken off at the end of each period is designed to present to Management a complete report on the results of operating.

One of the features of our system is that nearly 1,000 laundry-owners who have adopted this system can compare with each other on the results of operating.

Much thought was given to the proper distribution of overhead expenses. Previous to the adoption of this system, most well-conducted laundries knew their labor costs and their supply costs, but didn't know their "overhead" costs, which in our industry and I presume in all other industries, represent a very substantial amount of the operating cost element.

A Manual of Instructions

In the very beginning, a manual of instruction for the installation and upkeep of our system was prepared. This manual has been a tower of strength in the operation of the system because it tells the bookeeper, among many other things, to what accounts all items of expense should be charged.

Before this system was designed and installed in laundries, we frequently heard members of our association attempt to discuss costs at our annual conventions. For the reason that the men entering into these discussions were not speaking the same language, were not discussing cost features in a uniform way, there was very little gained through these conferences.

Even in the matter of payroll, which was the principal thing discussed in the old days, the men were not in agreement as to what constituted the payroll of a laundry.

In our system the payroll is divided into productive labor, supervision, power plant labor, collection and delivery, office and executive. Through this division, the payroll is divided into its component parts and it is easy for our members to compare this principal item of expense to the power laundry.

In the old systems of accounting used by laundries, there were seldom seen any separate accounts such as advertising, bad debts, lost and damaged goods and welfare work. These items along with many others are properly taken care of in our operating statement. So much for the cost accounting.

Cost Surveys or Tests

Our staff is also in position to make cost surveys or tests, as they are sometimes called. The basis for these cost tests is, of course, our accounting system. The cost tests are designed to show the cost of production of different classes of laundry work such as bundle work, or the bachelor's bundle, costs on the different family services, and costs on commercial flatwork.

The last item mentioned was one of the principal stumbling blocks in our industry. No one knew what the cost of production of this class of work was and very frequently it was done at less than half the cost of production. The equipment for doing this class of work is particularly expensive and in many cases men in our industry have been known to mortgage their entire plants in order to secure equipment to do this class of work, and more often than otherwise the competition for this class of work was very keen and it frequently meant price wars within our Industry, which caused no end of trouble and contention, and often seriously affected service charges on other classes of work.

I frankly believe that our cost accounting system has done more to do away with price-cutting troubles within our Industry than has any other one thing.

It seems to me that every trade association and every industry should have a uniform system of accounting.

The trade association department of the Chamber of Commerce of the U. S. A. is in position to help any industry that is desirous of adopting uniform cost accounting methods. This was not the case when our system was designed and adopted. We had to pioneer the movement.

I would recommend that any trade association interested in uniform cost accounting for its industry take this matter up with Dr. Baker's Department, as I am sure in so doing they would be saved a great deal of the trouble and anxiety we were compelled to go through.

Am glad that E. W. McCullough, of the Department of Manufacture of the Chamber of Commerce, U. S. A. is to take part in this discussion. We have received a great deal of assistance from him and his associates, and I am sure that what he will have to say on the subject of uniform cost accounting will be sound advice in every respect. (Applause):

MR. BURKE: Thank you very much, Mr. Fitch; it is indeed a pleasure to me to know that the Laundryowners have gone into this question of cost accounting so thoroughly, and I want to congratulate you on the splendid work you have done in your industry, along these lines. I shall pay my hotel laundry bills in future with a more cheerful feeling that they are based on sound reckoning. Now gentlemen, it was not an easy matter to get a speaker who could give us the "members viewpoint" on the Development of Uniform Gost Accounting Through Trade Associations. Several gentlemen whom I approached on the matter, unfortunately were unable to be present, and in this connection I may say that in view of the two other luncheon meetings being held at this time, one of them on a subject of particular interest, I feel we did well to have about thirty present at this meeting.

However, E. W. McCullough, manager, Department of Manufacture, Chamber of Commerce of the U. S. A. has consented to step into the breach, and it is with great pleasure that I introduce Mr. McCullough.

Evidence of Increasing Interest

E. W. MCCULLOUGH: Mr. Chairman and Gentlemen: I am very glad to contribute a little evidence of the increasing interest in the development of uniform cost accounting by members of trade associations from our observations and contact with the work during the past ten years, during which time the subject has been one of the major activities of my Department.

From a state of feeling that while cost knowledge is fundamental, yet a leaning to the line of least resistance in being satisfied with costs developed by a variety of methods, the various lines of industry, whose trade associations are working for the advance of their industries through better methods, the realization has borne in upon them that if costs are to be (as they are) an important factor in intelligent competition, the project must be a study of the industry so that not only every member of it shall know his own costs, but that in the development of them a formula approved by the industry shall be used in order that costs may be comparable and the system of developing them improved as it is continued in use.

In the beginning we were obliged to seek out and labor with industries to convince their members that they had no greater problem than cost accounting, but now, with the pressure of competition not only within their own industries but also from without, the demand to know more accurately the dividing line between profit and loss has become so insistent that at the present time we are kept busy in assisting organizations in their preparations for building a uniform cost system through the members of the industry. A uniform cost system also renders a very great service entirely aside from establishing a base for reckoning profits, i.e., in advancing the standards of efficiency in both production and sales. Accurate costs will point out infallibly the lines which are paying a profit and should be continued, and those which should be dropped as a burden the manufacturer should not carry. This checking up of efficiency is also of interest to the personnel employed in production, for it invariably leads to greater interest and better returns on their efforts. The very fact that a cost accounting department exists in every consolidation or merger of industry is evidence of its importance on their efficiency programs.

In closing these remarks, I desire only to say that we are making no effort to demonstrate that cost accounting is fundamental, for that fact has been fully realized for some time, but we are pressing home the fact that it does make a difference what cost system is used whether or not uniform principles are recognized by the members of an industry and whether its general adoption and continuity is receiving the attention it should. Frankly, I know of no other cooperative effort in association work that will pay such large dividends in benefits which will be appreciated as a well established and intelligently guided cost activity.

Accounting Viewpoint

MR. BURKE: Thank you very much Mr. McCullough, I am sure we all appreciate your having brought us this message today.

There now remains the "Accounting Viewpoint" of the subject of the Development of Uniform Cost Accounting Through Trade Associations.

Although I was requested to act as chairman of this group luncheon meeting, I am going to take the liberty of saying a few words on that angle of the subject, my only excuse for doing so being that I have had some experience along those lines.

From a strictly theoretical standpoint it is a subject that bristles with difficulties for an accountant because the theory of accounting is that it is an exact science, in other words, there is "one best way" which should be adopted. But in dealing with trade association members, one is dealing with a cross-cut section of human nature, which means that there will be almost as many opinions as there are members, particularly in the matter of "figuring," because everyone feels he could "keep the books" just as well as anybody, but prefers a job where exactitude and monotonous work are not demanded.

Thus, it becomes necessary for an accountant specializing in this trade association work to decide definitely those things which he considers fundamental to sound accounting procedure, which he will obsolutely refuse to throw overboard and those not so important or more theoretical accounting practices which may be varied as practical experience dictates.

Several of you have remarked that public accounting firms are generally too theoretical when designing uniform cost accounting systems for trade associations.

I think that charge is true, but I want to say I sympathize with them, because unless they are very familiar with the industry or trade and thus know a great deal about its intricacies, they must guard against all eventualities. However, it is a fact that many of the most successful cost systems used by trade associations to-day were originally designed by public accounting firms and afterwards refined down to a practical basis by a cost committee appointed by the Association, for the purpose.

I believe the best procedure for a trade association, desiring to develop a uniform cost accounting plan for use by its members, to adopt, is to select an accountant familiar with the business of its members to develop such a plan with the help of a committee made up of selected accountants, employed by its members.

One word of warning. The work must not be undertaken half-heartedly. It must have the whole-hearted support of the chief executives of the bulk of the members, and it must not suffer for lack of funds. The work should be generously supported. It is not only important—it's vital. As long as you have members producing and selling goods who are not well informed as to the

cost of these goods, just so long will you have competitive conditions which make for chaos. Correct costs may not cure overproduction, but the knowledge gained, by the use of sound accounting methods, about the cost of the different products plus the information derived from a study of statistics, compiled from reports produced, as a result of the use of these uniform methods by the bulk of the trade, will certainly have a beneficial and steadying effect and tend to keep production more in line with current demand. This tendency will also have its effect in stabilizing prices.

The committee must bear in mind the legal prohibitions outlined by Mr. Kirsh and might well follow the procedure used by the Laundryowners Association in their very successful work under Mr. Fitch's able guidance. It can also undoubtedly secure a good deal of help and advice from Mr. McCullough's Department in the United States Chamber of Commerce.

In starting on work of this nature, there's nothing like finding out what the other fellow has done; Witness the success of the Wright Brothers in learning to fly. As you know they adopted this policy. They began where the others left off as far as knowledge went.

To those of you, who have had no accounting experience, I would say, don't tackle this job without the help of somebody, who has. On the other hand, don't pick a man just because he is an accountant, but select one who is a diplomat like yourself; I know all successful trade association secretaries are diplomats. I mean by that, they gain their objectives by persuasion, tact, knowledge of the facts and a general ability to see both sides of a problem. An accountant doing this work must seek uniformity by compromise, provided always the fundamentals underlying sound accounting procedure are not violated.

Should Develop Comprehensive Plan

A cost department really forms but a section of the accounting department. Therefore, my belief is, the committee should develop a plan which covers the entire accounting procedure. For instance, in my opinion, all organizations owning property, should operate a Plant Ledger. In our industry from 50 to 75 per cent of our invested capital is used to purchase "fixed" assets of this nature. Other industries may not have such a large ratio, but it seems to me it is only common sense as well as sound accounting practice, for trade associations to recommend to their members that they keep a careful record of all expenditures of this nature. It provides a proper set-up for depreciation charges which are just as much a cost item as labor and materials.

The drawing up of a Chart of Accounts and a Manual detailing what should be charged to each account, is also essential. Allowance must be made for differences in size of the units in the association and a simplified plan provided for the smaller units.

The modern tendency is toward the adoption of standard costs. This should not be misunderstood as suggesting that the same standard cost should be used by all. Each unit sets up its own standards, but in doing so, uses the uniform methods employed by all. The point is, that such standards provide a reliable measuring stick against which the actual results may be checked, operation by operation, and the reasons for variances may thus be easily ascertained.

There are a number of other points I would like to mention, but time is growing short and I know some of you have questions you wish to ask. Before closing however, there's one point I want to make and that is, that business organizations should make a profit on *all* capital "employed." By this I mean, they should not only figure on making a profit of say 12 or 15 per cent on their invested capital, but should also make the same profit on their borrowed capital. What's the difference between capital obtained from shareholders and that obtained from bondholders, or bankers? Too often, it seems to me, the tendency is, to charge the 6 per cent interest into costs and to overlook the fact that a risk has been assumed in borrowing this capital for which the borrower is entitled to some recompense. If we obtained the extra capital from our shareholders we should be expected to make a reasonable profit on it. We pledge their assets and get it elsewhere, then content ourselves by including in our cost the interest payable. Personally, I believe it's preferable to treat all capital employed on the same basis and to figure our profit margins accordingly.

An animated discussion took place for the remainder of the session, a number of questions being asked by those present.

A New Kind of Paper

The L. L. Brown Paper Company, of Adams, Mass., has developed and perfected an entirely new kind of record paper. It defies water, grease, perspiration, many acids and chemicals and extreme abrasion. When soiled it can be sponged with soap and water almost as if it were celluloid.

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Resistall papers are designed for records and documents which are used out-of-doors or amid damp or greasy conditions. Among the principal purposes for which they are intended are maps, charts, construction records, field books, shop and garage records, registration forms, certificates, index cards, visible index sheets, etc. Resistall papers are also designed for uses which require resistance to exceptionally rigorous handling.

This new kind of paper is made in three stock lines: Resistall Linen Ledger, Resistall Bond, and Resistall Index Bristol. Each is formed from 100 per cent white linen and cotton clippings.

Dirt Count of Rag Half-Stuff

As an aid in minimizing the dirt content in the finished paper, it is common mill practice in the manufacture of fine wood-fiber papers to make test sheets of the wood pulp and count the dirt specks in a given area. In the case of rag fiber as prepared for beating, commonly termed half-stuff, such determination is more difficult as owing to the comparatively greater length of the unit constituents of the material, it tends to form a lumpy and irregular test sheet. At the request of a rag-paper manufacturer, experiments were made by the Bureau of Standards on the preparation of a suitable test sheet. It was found that the half-stuff could be defibered sufficiently in water, with a high-speed agitator, to permit the formation of a satisfactory sheet with the ordinary type of test-sheet mold.

Union Bag Receives Pulp From West

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HUDSON FALLS, N. Y., November 11, 1929.—Three barges of pulp were received at the plant of the Union Bag and Paper Company this week from the Pacific Coast mill and other shipments are expected to follow in the near future. The pulp was unloaded at the terminal in Fort Edward and transported to the was the second received from the west during the past few months plant here by the company's fleet of trucks. This consignment and it is understood that from now on the firm will receive its raw materials from this new source.

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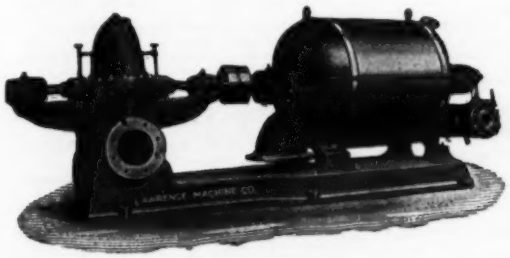

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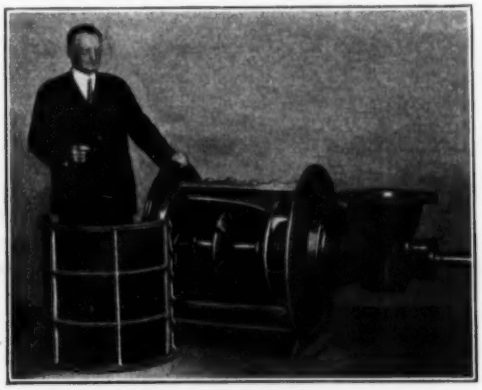

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Wall paper ..... 6 rolls, 194 bls., 46 cs.
Paper hangings ..... 3 rolls, 27 bls., 7 cs.
Raw hanging stock ..... 230 rolls
News print ..... 1270 rolls, 121 bls.
Printing paper ..... 115 rolls, 86 cs.
Painted paper ..... 2 cs
Wrapping paper ..... 145 bls.
Packing paper ..... 27 bls.
Tissue paper ..... 153 cs.
Drawing paper ..... 26 cs.
Filter paper ..... 3 bls., 34 cs.
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Coated paper ..... 3 cs.
Surface coated paper ..... 3 cs.
Metal paper ..... 27 cs.
Colored paper ..... 38 cs.
Decalcomania paper ..... 43 cs.
Writing paper ..... 17 cs.
Trunk paper ..... 2 cs
Stencil paper ..... 94 cs.
Miscellaneous paper ..... 19 bls., 112 cs.

CIGARETTE PAPER

Standard Products Corp., Berengaria, Southampton, 20 cs.
British American Tobacco Co., Olympic, Southampton, 11 cs.
De Manduit Paper Corp., Pipestone Co., Dunkirk, 54 cs.

WALL PAPER

J. E. Bernard & Co., Deutschland, Hamburg, 2 cs., 48 bls.
Kensington Wallpaper Co., Deutschland, Hamburg, 5 bls.
S. Stern Stiner Co., Deutschland, Hamburg, 1 ble.
F. J. Emmerich, Deutschland, Hamburg, 45 bls.
Globe Shipping Co., Deutschland, Hamburg, 21 bls.
R. F. Downing & Co., Minnewaska, London, 11 bls., 13 cs.
F. J. Emmerich, Minnewaska, London, 1 ble.
F. J. Emmerich, Albertic, Liverpool, 9 bls., 6 rolls.
J. E. Bernard & Co., Dresden, Bremen, 5 cs.
Heemsoth Basse & Co., Dresden, Bremen, 1 ble.
A. C. Dodman, Jr., Inc., America, Bremen, 25 bls.
A. C. Dodman, Jr., Inc., Olympic, Southampton, 27 bls., 3 cs.

PAPER HANGINGS

Whiting & Patterson Co., Inc., Berengaria, Southampton, 2 cs.
W. H. S. Lloyd & Co., Samaria, Liverpool, 1 ble., 3 rolls.
C. A. Haynes Co., Samaria, Liverpool, 4 bls.
A. C. Dodman, Jr., Inc., Deutschland, Hamburg, 2 cs.
W. H. S. Lloyd & Co., Minnewaska, London, 22 bls., 2 cs.
Whiting & Patterson Co., Inc., Olympic, Southampton, 1 cs.

RAW HANGING STOCK

F. & R. Trading Corp., America, Bremen, 230 rolls.

NEWS PRINT

Walker Goulard Plehn Co., Korsholm, Kotka, 121 bls.
——, Korsholm, Kotka, 620 rolls.
Journal of Commerce, Korsholm, Kotka, 80 rolls
Journal of Commerce, Bird City, Kotka, 76 rolls.
Parsons & Whittemore, Inc., Dresden, Bremen, 494 rolls.

PRINTING PAPER

J. Henschel Co., Deutschland, Hamburg, 28 cs.
——, Hagen, Hamburg, 22 cs.
Public National Bank, Estrella, Marseilles, 7 cs.
Martin & Bechtold, America, Bremen, 23 cs.
Keuffel & Esser Co., Leverkusen, Hamburg, 115 rolls.
F. L. Kramer & Co., Port Gisborne, London, 3 cs.
Winsor Newton, Inc., Port Gisborne, London, 2 cs.
Gallagher & Ascher, Port Gisborne, London, 1 cs.

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J. P. Heffernan Paper Co., Cabo Espartel, Genoa, 145 bls.

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Standard Products Corp., Berengaria, Southampton, 25 cs.
F. C. Strype, Samaria, Liverpool, 6 cs.
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DRAWING PAPER

Thomas & Pierson, Berengaria, Southampton, 1 cs.
Keuffel & Esser Co., Leverkusen, Hamburg, 22 cs.
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Hensel Bruckman & Lorbacher, America, Bremen, 15 cs.
——, America, Bremen, 6 cs.

COLORED PAPER

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S. Gilbert, Dresden, Bremen, 19 cs.
——, Dresden, Bremen, 16 cs.

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B. F. Drakenfeld & Co., Albertic, Liverpool, 29 cs. (duplex); 7 cs. (simplex).
C. W. Sellers, America, Bremen, 7 cs.

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Distinctive Writing Paper Co., Berengaria, Southampton, 6 cs.
Coenca Morrison Co., France, Havre, 11 cs.

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Keller, Dorian Paper Co., France, Havre, 13 cs.
American Express Co., France, Havre, 70 cs.
Japan Paper Co., France, Havre, 20 cs.
Fidelity Trust Co., Leverkusen, Hamburg, 19 bls.

RAGS, BAGGINGS, ETC.

Atlas Waste Manfg. Co., Cornelia, Ponce, 26 bls. rags.
Equitable Trust Co., Hagen, Hamburg, 64 bls. rags.
Cohen & Sons, Samaria, Liverpool, 90 bls. rags.
Baring Bros. & Co., Samaria, Liverpool, 104 bls. flax waste.
A. W. Fenton, Inc., Deutschland, Hamburg, 35 bls. rags.
E. Mayer, Deutschland, Hamburg, 15 bls. thread waste.
American Express Co., Minnewaska, London, 57 bls. rags.
A. W. Fenton, Inc., Saturnia, Trieste, 474 bls. rags.
Irving Trust Co., L. A. Christienson, Naples, 24 bls. rags.
Baring Bros. & Co., L. A. Christienson, Alexandria, 148 bls. rags.
S. Birkenstein & Sons, L. A. Christienson, Alexandria, 118 bls. rags.
P. Berlowitz, L. A. Christienson, Alexandria, 87 bls. rags.
Manufacturers Trust Co., Oscar II, Copenhagen, 137 bls. rags.
Equitable Trust Co., Oscar II, Copenhagen, 67 bls. flax ends; 434 bls. rags.
Banco Com'l Italiane Trust Co., Cabo Espartel, Palermo, 102 bls. rags.
E. Butterworth & Co., Inc., Cabo Espartel, Naples, 50 bls. rags.
Ban kof New York, Cabo Espartel, Genoa, 62 bls. rags.
Darmstadt, Scott & Courtney, Cabo Espartel, Genoa, 148 bls. cloth.
Anglo South American Trust Co., Albertic, Liverpool, 17 bls. rags.
Phila. National Bank, Carso, Naples, 262 bls. rags.
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Robert Blank, Tergestea, Bari, 37 bls. rags.
Fidelity Trust Co., Tergestea, Bari, 30 bls. rags.
Van Oppen & Co., Dresden, Bremen, 82 bls. cotton thread waste.
Chemical Bank & Trust Co., Estrella, Barcelona, 239 bls. rags.
W. Schall & Co., Estrella, Barcelona, 349 bls. rags.
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Chemical Bank & Trust Co., America, Bremen, 134 bls. rags.
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A. W. Fenton, Inc., Leverkusen, Hamburg, 40 bls. rags.
Irving Trust Co., Leverkusen, Hamburg, 180 bls. cotton waste.
W. Schall & Co., Pipestone Co., Dunkirk, 172 bls. bagging.
V. Galaup, Pipestone Co., Dunkirk, 26 bls. rags.
1st National Bank of Boston, Pipestone Co., Dunkrik, 107 bls. cotton waste.
Castle & Overton, Inc., Pipestone Co., Havre, 104 bls. bagging.
E. Butterworth & Co., Inc., Exarch, Genoa, 42 bls. rags.
Banco Com'l Italiane Trust Co., Exarch, Genoa, 635 bls. bagging.
E. J. Keller Co., Inc., Luceric, ——, 288 bls. rags; 57 bls. bagging.
E. J. Keller Co., Inc., City of Khios, 331 bls. rags, 78 bls. bagging.

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Brown Bros. & Co., Hagen, Hamburg, 51 bls., 244 coils.
J. C. van Stallie & Co., Deutschland, Hamburg, 34 coils.
Brown Bros. & Co., Deutschland, Hamburg, 33 coils.
Brown Bros. & Co., Saturnia, Trieste, 57 coils.
Banco Com'l Italiane Trust Co., Cabo Espartel, Palermo, 13 coils.
Banco Com'l Italiane Trust Co., Carso, Naples, 66 coils.
Brown Bros. & Co., Estrella, Barcelona, 109 coils.
Brown Bros. & Co., Pipestone Co., Havre, 100 coils.
International Purchasing Co., Exarch, Genoa, 70 coils.

CASEIN

Equitable Trust Co., Pipestone Co., Havre, 399 bags, 30,00 ks.
Equitable Trust Co., Leverkusen, Hamburg, 267 bags, 20,000 ks.
A. Hurst & Co., Minnewaska, London, 134 bags.
Kalbfleisch Corp., A. Legion, B. Ayres, 334 bags.
Bank of London & So. America, A. Legion, B. Ayres, 417 bags.
Trust Co. of North America, A. Legion, B. Ayres, 417 bags.
Atterbury Bros., Inc., A. Legion, B. Ayres, 1417 bags.
Crawford Keen & Co., A. Legion, B. Ayres, 1334 bags.

CHINA CLAY

L. A. Salomon & Bros., Baltic, Liverpool, 216 bags.
L. A. Salomon & Bros., Boston City, Bristol, 100 cks.

WOOD PULP

O. E. Kiaer, Korsholm, Stockholm, 300 bls. wood pulp.
——, Korsholm, Helsingfors, 1,270 bls. sulphite; 756 bls. sulphate.
Parsons & Whittemore, Inc., Hagen, Hamburg, 208 bls. sulphite.
Irving Trust Co., Hagen, Hamburg, 127 bls. wood pulp, 25 tons.
Castle & Overton, Inc., Hagen, Hamburg, 1,877 bls. wood pulp, 275 tons.
Chemical Bank & Trust Co., Hagen, Hamburg, 125 bls. wood pulp, 25 tons.
Chemical Bank & Trust Co., Stavangerfjord, Tofte, 900 bls. sulphite.
National City Bank, Oscar II, Oslo, 1,000 bls. wood pulp, 125 tons.
Johanson Wales & Sparre, Inc., Oscar II, Oslo, 900 bls. wood pulp, 180 tons.
Atterbury Bros., Inc., Oscar II, Oslo, 750 bls. wood pulp, 150 tons.
Castle & Overton, Inc., Leverkusen, Hamburg, 2,672 bls. wood pulp, 400 tons.
Irving Trust Co., Leverkusen, Hamburg, 128 bls. wood pulp, 25 tons.
——, Alssund, Hernosand, 4,290 bls. sulphite, 715 tons.
Pagel Horton & Co., Inc., Alssund, Hernosand, 300 bls. sulphite, 50 tons.

(*Continued on page 80*)

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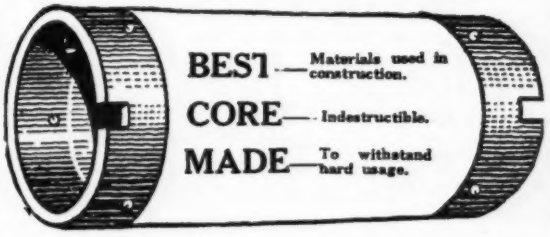
The Use of

ELIXMAN CORES

protects your rolls and insures their delivery to your customer in perfect condition. They eliminate claims for damages.

SHIPPING INSURANCE



Your two sources of supply are

Canadian Elixman Company
HAMILTON, ONTARIO

Elixman Paper Core Company
CORINTH, N. Y.

WOODPULP AGENTS

PRICE & PIERCE, Ltd.,

17 EAST 42ND ST.
NEW YORK

West Virginia Pulp and Paper Company

Manufacturers of

SUPERCALENDERED
and
MACHINE FINISHED BOOK
and LITHOGRAPHIC
PAPERS

Offset, Envelope, Bond, Writing, Cover and Music Paper, High Grade Coated Book, Index Bristol, Post Card, Kraft and Label Papers.

also

Bleached Spruce Sulphite and Soda, Kraft Pulp

230 Park Ave. New York
35 East Wacker Drive Chicago
503 Market St., San Francisco, Cal.
Sixth and Chestnut Sts., Philadelphia, Pa.

Imports of Paper and Paper Stock

(*Continued from page 78*)

J. Andersen & Co., Alssund, Hernosand, 1,290 bls. sulphite, 215 tons; 1,650 bls. sulphate, 330 tons.
E. M. Sergeant & Co., Alssund, Hernosand, 900 bls. sulphite, 150 tons.
J. Andersen & Co., Alssund, Soderhamn, 1,000 bls. sulphite, 200 tons.
Price & Pierce, Ltd., Alssund, Soderhamn, 750 bls. sulphite, 125 tons; 150 bls. sulphate, 25 tons.
Bulkley Dunton & Co., Alssund, ——, 14,850 bls. wood pulp.

WOOD FLOUR

B. L. Soberski, Stavangerfjord, Frederickstad, 1,875 bags.
The Burnet Co., Oscar II, Copenhagen, 1,016 bags.

WOOD PULP BOARDS

Lagerloef Trading Co., Hagen, Hamburg, 89 bls.
Lagerloef Trading Co., Leverkusen, Hamburg, 85 rolls, 187 bls.

BOSTON IMPORTS

WEEK ENDING NOVEMBER 23, 1929

M. Gottesman & Co., Inc., Tergeata, Sebenico, 4,000 bls. woodpulp.
V. Galaup, Pipestone Co., Dunkirk, 200 bls. rags.
M. Salter Sons, Pipestone Co., Dunkirk, 11 bls. rags.
M. Butterworth & Co., Inc. Pipestone Co., Dunkirk, 27 bls. rags.
E. Butterworth & Co., Inc., Pipestone Co. Havre, 30 bls. strings, 2 bls. rags.
Brown Bros. & Co., Pipestone Co. Havre, 65 bls. old rope.
Katzenstein & Keene, Inc., Pipestone Co., Havre, 68 bls. rags.
W. Schall & Co., Pipestone Co., Havre, 200 bls. rags.
R. Bishop Manfg. Co., Pipestone Co., Havre, 100 bls. rags.
Baring Bros. & Co., Pipestone Co., Havre, 35 bls. rags.
Castle & Overton, Inc., Pipestone Co., Havre, 15 bls. rags.
E. J. Keller Co., Inc., Pipestone Co.——40 bls. rags.
E. J. Keller Co., Inc., Binnendyk ——, 125 bls. rags.
Parsons & Whittemore, Inc., Taishan ——, 240 bls. sulphite pulp.

PHILADELPHIA IMPORTS

WEEK ENDING NOVEMBER 23, 1929

Pagel Horton & Co., Inc., Bird City Husum, 1,800 bls. sulphate 300 tons.
Perkins Goodwin & Co., Bird City, Obbola, 9,800 bls sulphate 1,400 tons.
Neidich Process Co., Bird City, Kotka, 73 bls. tissue paper.
Neidich Process Co., Bird City Kotka, 5,073 bls. woodpulp 950 tons.
Banco Com'l Italiane Trust Co., Cabo Espartel, Barcelona, 7 2 bls. rags.
Fidelity Trust Co., Estrella, Barcelona, 90 bls. rags.
Phila. National Bank, Estrella, Barcelona, 148 bls. rags.
Tradesman's National Bank, Estrella, Barcelona, 54 bls. rags.
National Vulcanized Fibre Co., Estrella, Barcelona, 71 bls. rags.
Bank of New York, Estrella, Valencia, 33 bls. rags.
E. J. Keller Co., Inc., Estrella ——, 98 bls. rags.
National City Bank, Exminster, Bari, 191 bls. rags.
J. A. Steer & Co., Exarch, Marseilles, 99 bls. rags.
S. Birkenstein & Sons, Exarch, Marseilles, 87 coils old rope.
Parsons & Whittemore, Inc., Taishan, 1,200 bls. sulphite; 1,950 bls. sulphate; T1,170 bls. woodpulp.

BALTIMORE IMPORTS

WEEK ENDING NOVEMBER 23, 1929

Perkins Goodwin & Co., Bird City, Obbola, 4,550 bls. sulphate, 650 tons.
——, Bird City, Kotka, 715 bls. sulphite, 119 tons.
Pagel Horton & Co., Inc., Bird City, Hornefors, 4,500 bls. sulphite, 750 tons.
Pagel Horton & Co., Inc., Bird City, Husum, 150 bls. sulphite, 25 tons; 6,600 bls. sulphate, 1,100 tons.
National City Bank, Exminster, Bari, 97 bls. rags.
Parsons & Whittemore, Inc., Taishan, 4,350 bls. sulphate; 1,350 bls. sulphite.
Parsons & Whittemore, Inc., Sachsen ——, 1,535 bls. wood pulp.

Indianapolis Paper Market Quiet

INDIANAPOLIS, Ind., November 25, 1929.—Little change is seen in the local paper market. There is some increase in several grades due to the holiday season but other than this business is very slow. There has been some activity since the summer dull season, but the volume of orders is not as large as had been expected. The stock market debacle failed to have any appreciable effect on business in this section, other perhaps than to curtail buying of luxuries. Other lines of business would have nothing to show them there was a stock market other than newspaper quotations.

The better grades of paper to be used for direct mail advertising and similar uses are selling more or less rapidly to the printers who have quite a bit of work already under contract and have more in sight following the first of the year. Demand for wrapping paper also is increasing slightly, as is the demand for print paper. It is doubtful if the December business this year will be any ahead of last year, but there will be a fair demand.

Largest Pulp Driers in the World

An order for two new pulp drying machines to be installed in the large chemical pulp mill now in course of construction at Kexholm, Finland, has been placed with the firm of J. M. Voith, Heidenheim, Germany. Each of the machines, which will be the largest of their kind in Europe if not in the world, will have a trim of 4,000 mm. (158 inches) and will be equipped with removable wire part, Voith stock inlet, 4 presses and 52 dryers of 1,500 mm. (60 inches) diameter each, also with cutter and automatic lay-boy.

Messrs. J. M. Voith have at the present time orders on hand for a total of 21 paper machines, board machines and pulp drying machines, also for the complete equipment for 2 sulphite pulp and one straw pulp mill, besides a great number of Voith-Warren continuous grinders, beaters, winders and auxiliary machinery.

Their extensive plants at Heidenheim, Germany, with a working force of some 3,500 men and at St. Poelten, Austria, where approximately 1,500 men are employed, are devoted to the manufacture of pulp and paper mill equipment and of machinery.

Penberthy Drier Equipment

The Penberthy Injector Company, Detroit, Mich. has issued an attractive and very helpful new catalogue of its drier equipment. In the introduction it is stated that "The modern paper machine is a very complicated mechanism and requires complete co-ordination of all its component parts to produce efficiently and continuously at maximum speed a product of high and uniform quality.

"Drying is but one of the processes of paper making but is by no means the least important. Upon the efficiency and effectiveness of the drying process depend to a very great extent the continuity of production, the maximum rate of production, and the attainment of a high standard of quality.

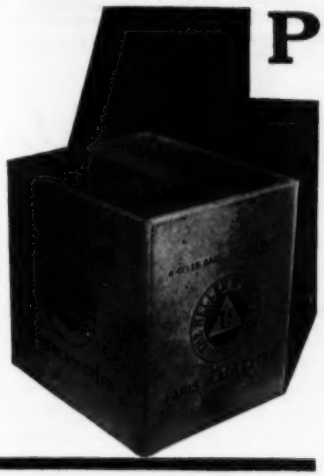
"Realizing, therefore, the importance of the drying process, and the necessity for the machine operator to understand perfectly the function of each piece of equipment in the process, The Penberthy Injector Company presents here information related to the Penberthy Drier Equipment.

"This information includes operating principles, installation notes, advantages gained by graduating dried surface temperatures, the location of and remedies for troubles, and data on other factors affecting drying. It is the result of years of experience gained by Penberthy engineers in installing this equipment."

Earnings of International Paper & Power Co.

The consolidated net current assets of the International Paper and Power Company on September 30 amounted to $50,875,000. The gross current assets were $75,461,000 against which there stood current liabilities of $24,586,000, these latter comprising only ordinary accounts payable and accruals of interest and dividends, all bank debts of the company and of all its subsidiaries having been paid off.

The current assets total of $75,461,000 included cash of $13,947,000 and accounts and notes receivable of $21,111,000, a total for these items of slightly over $35,000,000. Inventories plus cash advanced for logging operations, taken at the lower of cost or market aggregated $40,403,000, a normal amount for this time of year.



PARIS BLACK IN FIBRE CONTAINERS

Still going strong . . have you ordered?

Buyers liked the idea of Paris Black in Fibre Containers right from the start. There has been no let down in the demand—in fact, it is increasing.

Prompt deliveries made from stocks in NEW YORK BOSTON PHILADELPHIA CHICAGO

So this is a reminder to try it, in case you aren't already a satisfied user. By packing in fibre containers, the full strength and fine quality of Heller & Merz Paris Black reaches your plant unimpaired.

Ask us to quote.

The HELLER & MERZ COMPANY

505 Hudson St., New York

Boston 287 Atlantic Ave. | Chicago 146 W. Kinzie St. | Springfield, Mass. 40 Albert St. | Philadelphia 114 Market St.

Factory—NEWARK, N. J.

LINDSAY SPIRAL WEAVE FOURDRINIER WIRES

prevent grooving of Seams on machines not equipped with oscillating Suction Boxes. This lengthens the life of wires and increases their production.

THE LINDSAY WIRE WEAVING CO.

14025 Aspinwall Ave.
CLEVELAND, OHIO

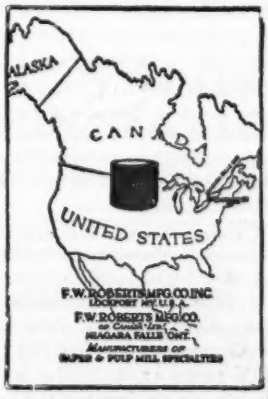
St. Regis Paper Company

Daily Capacity, 525 Tons

Newsprint
Catalog and Directory
Packers Oiled Manila
Fibre Wrapping
Specialties

General Sales Office
15 BROAD STREET
NEW YORK

BURRS



BURRS

New York Market Review

Office of the PAPER TRADE JOURNAL,
Wednesday, November 27, 1929.

Conditions during the past week in the local paper market have been active, reflecting no downward trend in sympathy with the consistently low stock market tendency. There has been a fair demand, and a general firmness of price is noted in all grades. The movement into consumption continues at a fair pace.

The news print market shows the same high level of production, with mills running at approximately 85 per cent of capacity. Shipments are also going forward at a good rate, and the old practice of overstocking seems to have been largely overcome.

Paper boards continue in persistent demand, with the price situation unchanged. Fine paper remains at its previous level, with price and shipments holding to schedule. There are no radical developments in the coarse paper market. Wrapping paper continues to go forward in good quantity.

Mechanical Pulp

Moderate activity was observed in the mechanical pulp market during the past week. Offerings are still scarce, with a consequent strong undertone in price. Transactions of business in this market have been mainly along routine lines.

Chemical Pulp

Trading in the market for chemical pulp was fairly active this week. Demand for bleached sulphite is not a steady as that for the strong unbleached and easy bleaching grades of sulphite pulp. The latter are in good seasonal request. Prices remain unchanged.

Old Rope and Bagging

Satisfactory conditions are prevailing in the old rope and bagging market, with imported and domestic old manila in good demand, as is mixed rope also. Practically no changes have occurred in the bagging market. Scrap and roofing grades are being shipped to the mills regularly.

Rags

Generally quiest conditions rule the rag market this week, with some inquiries around for foreign rags, although demand is light. Roofing rags and mixed rags are in fair request. Prices remain at last week's levels.

Waste Paper

Lower grades of paper stock are still weak for the time of year, while the better grades of waste paper remain steady. No 1 mixed is now selling at from .33 to .38, Manila container at .40 to .50, Bogus Wrapper at .60 to .65, and common paper at .18 to .23.

Twine

The expanded demand for twine at this season continues, with the movement into consumption expedited during the closing months of the year. Shading of price is infrequent.

National Coated Paper Receiver Discharged

Announcement is made that Arthur A. Thomas has been discharged as receiver for the National Coated Paper Corporation, of Pawtucket, Rhode Island. This final decree also dissolves the National Coated Paper Corporation. The T. L. P. Corporation, which purchased the assets of the National Coated Paper Corporation and which has been continuing the business since last June has now changed its name and becomes the National Coated Paper Corporation.

John D. Rue Joins News Print Service Bureau

On December 1, John D. Rue will take up the duties of engineer on the staff of the News Print Service Bureau and carry forward the work so excellently done during the past two years by W. G. MacNaughton, who has resigned in order to accept an offer in another field of activity. Mr. Rue is well known to the North American paper industry. Following his graduation from Princeton in 1906 with the degree of B. S., and in 1908 with that of A. M., Mr. Rue carried on graduate work at Heidelberg University, the Zurich Polytechnikum, and the University of Michigan, serving also at the latter institute as instructor and assistant professor of chemical engineering 1913-1917. Then he was captain in the Chemical Warfare Service at the Edgewood Arsenal and thereafter joined the Management and Engineering Development Company with charge of the installation and operation of technical control in the Fraser Mills at Edmunston, N. B.

From 1921 to 1927, Mr. Rue was in charge of the pulp and paper section of the Forest Products Laboratory at Madison, Wis. Notable contributions to the progress of the industry were made under his direction, including the introduction of the rod mill for refining and hydration of fibrous materials, the semi-chemical method of cooking, improved methods for the control of decay in pulpwood and wood pulp, and the organizing of courses of instruction in sulphite pulp manufacture which were participated in by many mill operators and followed by the application of laboratory results in practical mill control.

During the past two years, Mr. Rue has been Director of Research for the Champion Fibre Company, Canton, N. C., making a wide variety of papers. He is also chairman of the Committee on Waste Utilization and Stream Improvement of the American Paper and Pulp Association, a leading member of the American Institute of Chemical Engineers, one of the earliest members of the Technical Association of the Pulp and Paper Industry, and a member of the Technical Section of the Canadian Pulp and Paper Association since 1920.

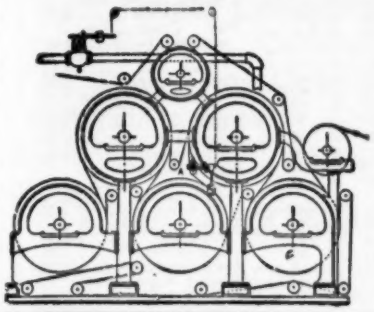
Mr. Rue thus brings to the news print industry a combination of technical training, varied practical experience and broad outlook which will be of unquestioned value in handling the many operating problems which come to the attention of the Bureau.

Fred H. French Paper Co. In Larger Quarters

LOS ANGELES, Cal., November 25, 1929.—The Fred H. French Paper Company has moved to 828-832 Traction avenue, where a term lease has been obtained through Max Elsner, of the J. W. Lewis Company, wholesale and manufacturing property brokers. The new location has a frontage of 100 feet by a depth of 140 feet to a spur track, and the major portion is occupied by a three-story building, comprising a total floor area of 42,000 square feet. Extensive alterations have been made to the building.

The Fred H. French Paper Company distributes throughout California and adjoining States, papers used by the printing, publishing and stationery trades. The firm was established in 1920 by Fred H. French, who has been connected with the wholesale paper business for the past thirty-eight years. His son, Oliver E. French, has been associated with him for several years as partner and assistant general manager.

The Pickles Drying Regulator



WE ARE SAFE IN OUR PROPOSITION

YOU'LL MAKE NO MISTAKE IN ACCEPTING IT

Pickles Drying Regulator

will do everything we claim for it and more. The test costs you nothing until you are satisfied. Many mills tried one and now have every machine equipped. Write for list of users and other information.

W. F. PICKLES **Buckland, Conn.**

The B.Q. QUALITY PULPS

"HAFSLUND BEAR"
Bleached Sulphite

"FORSHAGA"
Bleached Sulphite

"HURUM SPECIAL"
Extra Strong Kraft

"BAMBLE"
Extra Strong Kraft

Fresh Monthly Shipments—No Closed Winter Season

The Borregaard Company
Incorporated
200 FIFTH AVENUE NEW YORK, N. Y.

THE DRAPER FELTS

All kinds and styles of Felts for all kinds and styles of Papers.

Write us about your Felt problems and let us help you reduce your Felt Costs—we will call anywhere at any time.

DRAPER BROS. COMPANY
CANTON, MASS.
Woolen manufacturers since 1856

Perforated Metal Screens
for every purpose

also elevator buckets of all kinds; chutes; hoppers; stacks and tanks.

MITCO Products — Interlocked Steel Grating; Shur-Site Stair Treads; Armorgrids.

HENDRICK MANUFACTURING CO.
50 Dundaff St., Carbondale, Pa.
New York: 30 Church St. Pittsburgh: Union Trust Bldg.

JOHN WALDRON CORPORATION
Paper Converting Machinery Builders Since 1827
Main Office and Works—NEW BRUNSWICK, N. J.
CHICAGO NEW YORK

BELLE ALKALI COMPANY, BELLE, W.VA.
LIQUID CHLORIDE BELLE BRAND CAUSTIC SODA
Cylinders—Ton Tanks—Tank Cars
76%—Solid Liquid Flake
Arnold, Hoffman & Co. Inc. Sole Agents
PROVIDENCE BOSTON NEW YORK
PHILADELPHIA CHARLOTTE

Miscellaneous Markets

Office of the PAPER TRADE JOURNAL,
Wednesday, November 27, 1929.

BLANC FIXE.—The blanc fixe market continues unchanged. There is a fairly steady demand for both powder and pulp. Quotations on the powder are from 3¾ to 4½ cents per pound, in barrels, at works, with pulp at from $42.50 to $45.00 per ton in bulk quantities.

BLEACHING POWDER.—Conditions in the bleaching powder market are satisfactory. There is a seasonal activity, with no change in prices. Shipments are going forward at a fair rate. Schedule prices are from $2.00 to $2.35 per 100 pounds, in large drums, at works.

CASEIN.—Movement of casein into consumption goes forward steadily, with few spot sales. Previous prices hold at 16 to 16¼ for the Argentine standard ground, finely ground at from 16½ to 17 cents per pound. Domestic brands are priced at from 15¾ to 16¾ cents per pound, for car load quantities, in bags.

CAUSTIC SODA.—Trading in the caustic soda market is quiet. Contract shipments are going forward normally. Flake and ground caustic soda is quoted at from $3.30 to $3.35 per 100 pounds, at works, in large drums, with the solid at from $2.90 to $2.95.

CHINA CLAY.—The China clay market remains firm, and a satisfactory volume of business is being booked at the previous prices. Imported brands are from $15 to $25 per ton, ship side, with domestic varieties selling at from $8 to $13 per ton, at mine.

CHLORINE.—There was a fair amount of activity in the chlorine market during the past week, with bookings for 1930 delivery continuing to be placed at $2.85 per 100 pounds in tank cars, at works. There is little spot demand.

ROSIN.—The market for rosin is irregular. Wood rosin sells from $7.00 to $8.05 per 280 pounds, in barrels, at southern shipping points. Gum rosin is now quoted at $8.65 per 280 pounds, in barrels, on dock.

SALT CAKE.—Fairly firm conditions are noted in the salt cake market, with few offerings being made. Contract shipments continue in normal amounts. Quotations are from $20 to $23 for salt cake, in bulk, at works, while the price on chrome salt cake is $17 to $18 per ton.

SODA ASH.—Demand for soda ash is being filled promptly, and the present prices are $1.32 in bags, $1.55 in barrels, in car lots, at works.

STARCH.—There is a prevailing tone of firmness in the starch market. Fair request is noted, and this demand is met by seasonal production. Prices hold at $3.92 per 100 pounds, in bags, and at $4.19 per 100 pounds, in barrels, at works, for special paper mill starch.

SULPHATE OF ALUMINA.—Continued demand for sulphate of alumina keeps the market active, with contract shipments going along at the usual rate. Commercial sulphate is quoted at from $1.40 to $1.55, with iron free at $1.90 to $2.05 per 100 pounds, in bags, at works.

SULPHUR.—No radical changes have occurred in the sulphur market. Quotations for spot and nearby car loads, $21 per ton. Yearly contracts are at $18 per ton at mine, in lots of $1,000 tons, and $20 per ton for smaller quantities during that period.

TALC.—The talc market holds to previous levels. Transaction of business is more or less routine in this market at present. Imported talc is selling at $18 to $20 per ton, in bags, ship side, with domestic grades at from $16 to $18 per ton, in bulk, at eastern mines.

Pulp Testing Chemist Approved

Dan M. Wadsworth, of the Bogalusa Paper Company, Bogalusa, La., has been accepted by the Joint Committee on Approved Pulp Testing Chemists for the Paper Industry of the United States as an Approved Mill Pulp Testing Chemist, and is listed as such, effective November 21, 1929.

Market Quotations

Paper
(F. o. b. Mill)

Ledgers	11.00	@38.00
Bonds	9.00	@53.25
Writings—		
Extra Superfine	14.00	@32.00
Superfine	14.00	@32.00
Tub sized	10.00	@15.00
Engine sized	8.00	@11.00
Book, Cased—		
S. & S. C.	6.00	@ 7.50
M. F.	5.75	@ 7.00
Coated and Enamel	7.50	@12.00
Lithograph	7.50	@12.00
Tissues—Per Ream—		
White No. 1	.75	@ 1.00
Anti-Tarnish	1.35	@ 1.90
Colored	1.00	@ 2.00
White No. 2	.75	@ .80
Kraft	1.00	@ 1.10
Manila	.75	@ .80
Kraft—		
No. 1 Domestic	6.25	@ 6.50
No. 2 Domestic	5.25	@ 5.50
Southern	4.25	@ 4.50
Imported	6.50	@ 7.00
Manila—		
No. 1 Jute	9.00	@ 9.25
No. 2 Jute	7.75	@ 8.50
No. 1 Wood	4.75	@ 5.25
No. 2 Wood	4.00	@ 4.50
Butchers	3.75	@ 4.25
Fibre Papers—		
No. 1 Fibre	5.00	@ 5.50
No. 2 Fibre	4.75	@ 5.25
Common Bogus	2.75	@ 3.00
Screenings	3.00	@ 3.25
Card Middles	4.00	@ 5.00
Glassine—		
Bleached, basis 25 lbs.	13.00	@16.00
Bleached, basis 20 lbs.	15.00	@16.00

(Delivered New York)

News, per ton—		
Rolls, contract	62.00	@ —
Rolls, spot	62.00	@ —
Sheets	67.00	@ —
Side Runs	47.00	@52.00
Boards—per ton—		
News	37.50	@40.00
Straw	52.50	@55.00
Chip	35.00	@37.50
Binders' Boards	65.00	@70.00
Wood Pulp	80.00	@85.00
65 Test Jute Liner	45.00	@47.50
85 Test Jute Liner	50.00	@55.00
Sgl. Mla. Ll. Chip	47.50	@50.00

Mechanical Pulp
(On Dock)

No. 1 Imported—		
Moist	30.00	@32.00
Dry	32.00	@34.00

(F. o. b. Mill)

No. 1 Domestic	26.00	@30.00
Screenings	15.00	@20.00

Chemical Pulp
(On Dock, Atlantic Ports)

Sulphite (Imported)—		
Bleached	3.75	@ 4.25
Easy Bleaching	3.00	@ 3.15
No. 1 strong unbleached	2.75	@ 3.00
Mitscherlich unbleached	2.80	@ 3.25
No. 2 strong unbleached	2.40	@ 2.60
No. 1 Kraft	2.35	@ 2.65
No. 2 Kraft	2.30	@ 2.50
Sulphate—		
Bleached	3.60	@ 3.85

(F. o. b. Pulp Mill)

Sulphite (Domestic)—		
Bleached	3.40	@ 4.75
Easy Bleaching Sulphite	2.65	@ 3.00
News Sulphite	2.50	@ 2.70
Mitscherlich	3.00	@ 3.25
Kraft (Domestic)	2.10	@ 3.30
Soda Bleached	3.10	@ 3.25
Sulphate Screenings—		
Coarse	.75	@ .95
Refined	1.65	@ 1.85

Domestic Rags
New Rags
(Prices to Mill f. o. b. N. Y.)

Shirt Cuttings—		
New White, No. 1	11.00	@11.50
New White, No. 2	8.00	@ 8.50
Silesias No. 1	7.50	@ 8.00
New Unbleached	11.00	@11.50
New Blue Prints	5.25	@ 5.50
New Soft Blacks	5.25	@ 5.75
Blue Overall	7.50	@ 8.00
Washables	4.75	@ 5.25
Fancy	5.75	@ 6.25
Mixed Khaki Cuttings	4.75	@ 5.25
Pink Corset Cuttings	8.00	@ 8.50
O. D. Khaki Cuttings	5.15	@ 5.75
Men's Corduroy	3.75	@ 4.25
New Mixed Blacks	3.50	@ 3.75

Old Rags

White, No. 1—		
Repacked	5.50	@ 6.00
Miscellaneous	4.50	@ 5.00
White, No. 2—		
Repacked	3.00	@ 3.50
Miscellaneous	2.50	@ 2.75
St. Soiled, White	2.00	@ 2.15
Thirds and Blues—		
Repacked	2.25	@ 2.50
Miscellaneous	1.75	@ 2.00
Black Stockings	3.25	@ 3.75
Roofing Rags—		
Cloth Strippings	1.70	@ 1.80
No. 1	1.70	@ 1.80
No. 2	1.55	@ 1.65
No. 3	1.30	@ 1.40
No. 4	1.25	@ 1.35
No. 5A	.90	@ 1.05

Foreign Rags
New Rags

New Dark Cuttings	2.50	@ 3.00
New Mixed Cuttings	2.75	@ 3.25
New Light Silesias	7.00	@ 7.50
Light Flannelettes	7.50	@ 8.00
Unbleached Cuttings	10.00	@11.00
New White Cuttings	10.00	@10.50
New Light Oxfords	7.00	@ 7.50
New Light Prints	5.50	@ 6.50

Old Rags

No. 1 White Linens	7.50	@ 8.25
No. 2 White Linens	5.75	@ 6.75
No. 3 White Linens	4.75	@ 5.25
No. 4 White Linens	3.00	@ 3.50
No. 1 White Cotton	5.50	@ 6.50
No. 2 White Cotton	4.50	@ 5.50
No. 3 White Cotton	3.00	@ 4.00
No. 4 White Cotton	1.90	@ 2.15
Extra Light Prints	2.75	@ 3.25
Ord. Light Prints	2.25	@ 2.50
Med. Light Prints	2.00	@ 2.10
Dutch Blue Cottons	2.25	@ 2.40
French Blue Linens	2.75	@ 2.85
German Blue Linens	2.35	@ 2.55
German Blue Cottons	2.15	@ 2.25
Checks and Blues	1.85	@ 2.00
Lindsay Garments	1.85	@ 1.95
Dark Cottons	1.55	@ 1.60
Old Shopperies	1.50	@ 1.55
New Shopperies	1.50	@ 1.55
French Blues	2.10	@ 2.25

Old Rope and Bagging
(Prices to Mill f. o. b. N. Y.)

Gunny No. 1—		
Foreign	1.50	@ 1.60
Domestic	1.60	@ 1.70
Wool Tares, light	1.60	@ 1.65
Wool Tares, Heavy	1.60	@ 1.70
Bright Bagging	1.60	@ 1.70
Small Mixed Rope	1.25	@ 1.40
Manila Rope—		
Foreign	4.40	@ 4.60
Domestic	4.75	@ 5.00
New Burlap Cut	2.75	@ 3.00
Hessian Jute Threads—		
Foreign	3.50	@ 4.00
Domestic	3.25	@ 3.50

Old Waste Papers
(F. o. b. New York)

Shavings—		
Hard, white, No. 1	3.00	@ 3.25
Hard, white, No. 2	2.40	@ 2.55
Soft, White, No. 1	2.30	@ 2.45
White envelope cuttings	2.90	@ 3.10
Flat Stock—		
Stitchless	1.45	@ 1.55
Overissue Mag.	1.45	@ 1.55
Solid Flat Book	1.40	@ 1.50
Crumpled No. 1	1.00	@ 1.10
Solid Book Ledger	2.00	@ 2.10
Ledger Stock	1.40	@ 1.90
New B. B. Chips	.45	@ .55
Manilas—		
New Env. Cut	2.40	@ 2.60
New Cuttings	1.50	@ 1.75
Extra No. 1 old	1.25	@ 1.35
Print	.60	@ .65
Container	.40	@ .50
Bogus Wrapper	.60	@ .65
Old Kraft Machine Compressed bales	1.65	@ 1.75
News—		
No. 1 White News	1.65	@ 1.75
Strictly Overissue	.65	@ .70
Strictly Folded	.55	@ .60
No. 1 Mixed Paper	.33	@ .38
Common Paper	.18	@ .23

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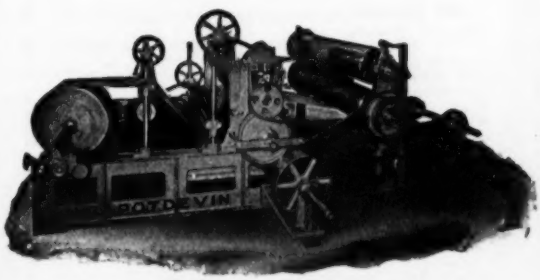

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Quarries
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Twines
(F. o. b. Mill)

Cotton—			
No. 1	.39	@	.40
No. 2	.37	@	.38
No. 3	.36	@	.37
B. C., 18 basis	.38	@	.40
A. B. Italian, 18 basis	.48	@	.53
Finished Jute—			
Dark 18 basis	.24	@	.25
Light 18 basis	.27	@	.28
Jute Wrapping, 3-6 Ply—			
No. 1	.19	@	.21
No. 2	.18	@	.20
Tube Rope—			
4-ply and larger	.16	@	.17
Fine Tube Yarn—			
5-ply and larger	.21	@	.25
4-ply	.25	@	.29
3-ply	.28	@	.32
Unfinished India—			
Basis	.13	@	.14
Paper Makers Twine			
Balls	.11	@	.12
Box Twine, 2-3 ply	.15	@	.17
Jute Rope	.17	@	.19
Amer. Hemp, 6	.29	@	.31
Sisal Hay Rope—			
No. 1 Basis	.16	@	.18
No. 2 Basis	.14	@	.16
Sisal Lath Yarn—			
No. 1	.14	@	.16
No. 2	.12	@	.14
Manila Rope	.22	@	.24

CHICAGO

Paper
(F. o. b. Mill)

Rag Bond	.30	@	.53¼
Water Marked Sulphite Bond	.09	@	.12
Sulphite Bond	.06¾	@	.11
Superfine writing	.18	@	.24
No. 1 fine writing	.14	@	.18
No. 2 fine writing	.12	@	.14
No. 3 fine writing	.08½	@	.12
No. 1 M. F. Book	.06½	@	.07¼
No. 2 M. F. Book	.05¼	@	.06¼
No. 1 S.&S.C. Book	.06¾	@	.07¾
No. 2 S.&S.C. Book	.05¾	@	.06½
Coated Book	.07½	@	.12
Coated Label	.07½	@	.10
No. 1 Manila	.04¼	@	.05¾
No. 1 Fibre	.04¾	@	.05¼
No. 2 Manila	.04¼	@	.04¾
Butcher's Manila	.04	@	.04½
No. 1 Kraft	.06¼	@	.06½
Southern Kraft	4.25	@	4.50
No. 2 Kraft	.04	@	.04¼
Wood Tag Boards	.04¼	@	.06¼
Sulphite Screenings	.03	@	.03¼
Manila Tissue—			
24x36 Sheet	.07	@	.07¼
White Tissue—			
20x30 Sheet	.07¼	@	.07½
(Delivered Central Territory)			
News, per ton—			
Rolls, contract	62.00	@	—
Sheets	67.00	@	—
Boards, per ton—			
Plain Chip	37.50	@	42.50
Solid News	47.50	@	—
Solid News	40.00	@	45.00
Manila Lined Chip	50.00	@	55.00
Container Lined—			
85 Test	65.00	@	70.00
100 Test	70.00	@	—

Old Papers
(F. o. b. Chicago)

Shavings—			
No. 1 Hard White	2.20	@	2.25
White Env. Cuttings	2.40	@	2.50
No. 1 Soft Shavings	2.00	@	2.10
No. 1 Mixed	.60	@	.70
No. 2 Mixed	.50	@	.60
Ledger & Writings	1.25	@	1.35
Solid Books	1.10	@	1.15
Blanks	1.40	@	1.50
Kraffs	1.60	@	1.75
New Kraft Cuts	2.15	@	2.25
Manila Envelope Cuttings	1.75	@	1.80
Ex. No. 1 Manila	1.30	@	1.45
Print Manila	.70	@	.75
Folded News (over-issue)	.70	@	.75
Old Newspapers—			
No. 1	.65	@	.70
No. 2	.55	@	.65
Mixed Papers—			
No. 1	.50	@	.60
Roofing Stocks—			
(F. o. b. Chicago, net cash)			
No. 1	30.00	@	—
No. 2	28.00	@	—

PHILADELPHIA

Paper
(F. o. b. Mill)

Bonds	.06	@	.40
Ledgers	.09	@	.40
Writings—			
Superfine	.12½	@	.18
Extra fine	.18	@	.22
Fine	.17	@	.26
Fine, No. 2	.15	@	.25
Fine, No. 3	.10	@	.20
Book, M. F.	.05½	@	.07
Book, S. S. & C.	.06	@	.07½
Book, Coated	.09½	@	.16
Coated Lithograph	.07	@	.11
Label	.07	@	.11
No. 1 Jute Manila	.08	@	.09
Manila Sul., No. 1	.04	@	.05½
Manila No. 2	.03	@	.04
No. 2 Kraft	.06	@	.06½
No. 1 Kraft	.06½	@	.07
Common Bogus	.03½	@	.04
(Delivered Philadelphia)			
News Print Rolls	62.00	@	—
Straw Board	52.50	@	75.00
News Board	40.00	@	40.00
Chip Board	38.00	@	40.00
Wood Pulp Board	85.00	@	95.00
Binder Boards—			
No. 1, per ton	75.00		
No. 2, per ton	70.00		
Carload lots	68.00	@	70.00
Tarred Felts—			
Regular	55.50	@	57.00
Slaters (per roll)	.84	@	.94
Best Tarred, 1-ply (per roll)	1.95	@	2.10
Best Tarred, 2-ply (per roll)	1.50	@	1.60
Best Tarred, 3-ply	2.00	@	2.25

Domestic Rags (New)
(Price to Mill, f. o. b. Phila.)

Shirt Cuttings—			
New White, No. 1	.10½	@	.11
New White, No. 2	.07	@	.07½
Light Silesias	.07	@	.07½
Silesias, No. 1	.07	@	.09
Black Silesia, soft	.05	@	.05½
New Unbleached	.10½	@	.11
Washable, No. 1	.04½	@	.05
Blue Overall	.07½	@	.08
Cottons—According to grades—			
Washable, No. 2	.03	@	—
New Blue	.03	@	.03½
Fancy	.05½	@	.06
New Black Soft	.05	@	.05¾
New Light Seconds	.02½	@	.03
New Dark Seconds	1.85	@	2.00
Khaki Cuttings—			
No. 1 O. D.	.05½	@	.05¾
No. 2 Mixed	.04½	@	.04¾
Corduroy	.03	@	.03½
New Canvas	.08½	@	.09
New Black Mixed	.03¾	@	.04½

Bagging
(F. o. b. Phila.)

Gunny, No. 1—			
Foreign	1.50	@	1.60
Domestic	1.75	@	—
Manila Rope	3.50	@	4.00
Sisal Rope	1.50	@	—
Mixed Rope	1.10	@	1.25
Scrap Burlaps—			
No. 1	1.50	@	1.60
No. 2	1.10	@	1.20
Wool Tares, heavy	3.00	@	—
Mixed Strings	1.15	@	1.25
No. 1, New Light Burlap	2.50	@	2.75
New Burlap Cuttings	2.00	@	2.25

Old Papers
(F. o. b. Phila.)

Shavings—			
No. 1 Hard White	3.20	@	3.25
No. 2 Hard White	2.75	@	3.00
No. 1 Soft White	2.80	@	2.90
No. 2 Soft White	1.80	@	1.90
No. 1 Mixed	1.50	@	1.60
No. 2 Mixed	.90	@	1.00
Solid Ledger Stock	1.85	@	1.90
Writing Paper	1.60	@	1.65
No. 1 Books, heavy	1.40	@	1.50
No. 2 Books, light	1.05	@	1.15
No. 1 New Manila	2.40	@	2.50
No. 1 Old Manila	1.50	@	1.60
Print Manila	.95	@	1.00
Container Manila	.85	@	.90
Old Kraft	2.25	@	2.50
Common paper	.50	@	.55
No. 1 Mixed Paper	.60	@	.65
Straw Board, Chip	.60	@	.65
Binders Board, Chip	.60	@	.65
Overissue News	.80	@	.85
Old Newspaper	.50	@	.55

Domestic Rags (Old)

White, No. 1—			
Repacked	4.25	@	4.50
Miscellaneous	3.50	@	3.75
White, No. 2	2.00	@	2.25
Thirds and Blues—			
Repacked	2.00	@	2.25
Miscellaneous	1.60	@	1.80
Black Stockings (Export)	3.90	@	4.25
Roofing Stock—			
Foreign No. 1	1.65	@	1.75
Repacked	.01¾	@	.02
No. 2	1.30	@	1.35
No. 3 (Roofing)	1.15	@	1.25
No. 4	1.00	@	1.15
No. 5A	.75	@	.85
B	.65	@	.75
C	.65	@	.75

BOSTON

Paper
(F. o. b. Mill)

Ledgers—			
Sulphite	.07½	@	.12½
Rag content	.15	@	.30
All rag	.38	@	.52½
Bonds—			
Sulphite	.06½	@	.11½
Rag content	.15	@	.30
All rag	.36½	@	.65
Writings	.06½	@	.20
Superfines	.11	@	.31
Book, Super	.06	@	.09
Book, M. F.	.05½	@	.08½
Book, Coated	.08½	@	.18
Coated Litho	.09	@	.12
Label	.09½	@	.15
Jute Manila No. 1	.11	@	.13
Manila, Sul. No. 1	.04¾	@	.06½
Manila, Sul. No. 2	.03¾	@	.04½
No. 1 Kraft	.06¼	@	.06½
No. 2 Kraft	.04½	@	.05½
Common Bogus	.02	@	.02¾
Delivered New England points			
News Print Rolls	61.50	@	—
Straw Boards, rolls .009			52.50
Straw Board in Sheets, basis 35s to 70s	54.50	@	55.00
Filled News Board	37.50	@	40.00
Chip Board	35.00	@	37.50
Single Manila Lined Chip	50.00	@	—
Single White, Patent Coated Newsboard			
Bender	65.00	@	80.00
Wood Pulp Board	80.00	@	85.00
Binder Boards	70.00	@	75.00
(F. o. b. Mill)			
Tarred Felts—			
Regular, carload lots	65.00	@	—

Old Papers
(F. o. b. Boston)

Shavings—			
No. 1 Hard White	3.25	@	3.75
No. 2 Hard White	2.60	@	2.90
No. 1 Soft White	2.40	@	2.50
No. 1 Mixed	1.10	@	1.15
No. 2 Mixed	.85	@	.90
Solid Ledger Stock	2.35	@	2.45
No. 1 Books, Heavy	1.50	@	1.55
No. 1 Books, Light	—	@	1.15
Manila Env. Cuttings	2.00	@	2.25
No. 1 Old Manila	.90	@	1.00
White Blank News	1.50	@	1.60
Old Kraft	.165	@	1.85
Print Manila	.80	@	.90
No. 1 Mixed Paper	.42½	@	.47½
Overissue News	.60	@	.70
Old Newspapers	.45	@	.50
Box Board, Chip	.45	@	.50

Bagging
(F. o. b. Boston)

Gunny No. 1—			
Foreign	1.40	@	1.50
Manila Rope—			
Foreign	4.37½	@	4.50
Domestic	4.50	@	4.75
Transmission Rope	—	@	3.00
Mixed Strings	1.00	@	—
Jute Wool Strings	1.00	@	1.05
Jute Carpet Threads	1.05	@	1.15
Scrap Burlaps	1.37½	@	1.50
Scrap Sisal	1.80	@	2.00
Scrap Sisal for shredding	1.85	@	2.00
Wool Tares, heavy	1.60	@	—
New Burlap Cutting	1.90	@	2.00
Australian Wool Pouches	3.00	@	3.12½

Domestic Rags (New)
(F. o. b. Boston)

Shirt Cuttings—			
New White No. 1	.09½	@	.10
Silesias, No. 1	.06	@	.06¼
New Unbleached	.10	@	.10½
Fancy	.04	@	.04½
Washable	.04	@	.04½
Cottons—According to grades			
Blue Overalls	.06¼	@	.06¾
New Black, soft	.04	@	.04¼
Khaki Cuttings	.04	@	.04¾
O. D. Khaki	.05	@	—
Corduroy	.03	@	.03½
New Canvas	.08	@	.08½

Domestic Rags (Old)
(F. o. b. Boston)

Canvas	.04½	@	—
White No. 1—			
Repacked	4.75	@	5.25
Miscellaneous	5.00	@	—
White No. 2—			
Repacked	.04½	@	.05
Miscellaneous	.03½	@	.04
Twos and Blues	2.75	@	3.00
Thirds and Blues—			
Repacked	2.25	@	2.50
Miscellaneous	1.75	@	1.90
Black Stockings	—	@	4.00
Roofing Stock—			
No. 1	1.65	@	1.75
No. 2	1.45	@	1.55
No. 3	1.05	@	1.10
No. 4	1.10	@	1.15

Foreign Rags
(F. o. b. Boston)

Dark Cottons	—	@	1.55
New No. 1 Shirt Cuttings	9.00	@	9.50
Dutch Blues	2.00	@	2.12½
Lace Curtains	4.75	@	5.00
New Checks & Blues	4.25	@	4.60
Old Fustians	1.90	@	2.00
Old Linsey Garments	1.80	@	1.85

TORONTO

Paper
(F. o. b. Mill)

Bond—			
No. 1 Sulphite	.12½	@	—
No. 2 Sulphite	.10¾	@	—
No. 1 Colored	.13½	@	—
No. 2 Colored	.11¼	@	—
Ledgers (sulphite)	—	@	—
Ledgers, No. 1	.36	@	—
Ledgers, No. 2	.27	@	—
Writing	.09½	@	.10
Book—			
No. 1 M. F. (carloads)	7.50	@	—
No. 2 M. F. (carloads)	7.25	@	—
No. 3 M. F. (carloads)	7.00	@	—
No. 1 S. C. (carloads)	8.00	@	—
No. 2 S. C. (carloads)	7.75	@	—
No. 3 S. C. (carloads)	7.50	@	—
No. 1 Coated and Litho	13.25	@	—
No. 2 Coated and Litho	12.25	@	—
No. 3 Coated and Litho	11.50	@	—
Coated tinted	14.50	@	—
Wrapping—			
Rag Brown	4.95	@	—
White Wrap	5.25	@	—
"B" Manila	5.80	@	—
No. 1 Manila	6.65	@	—
Fiber	6.65	@	—
Kraft, M. F.	7.00	@	—
M. G.	7.00	@	—

(Delivered Toronto)

News, per ton—			
Rolls (contract)	61.50	@	62.00
Sheets	67.00	@	—

Pulp
(F. o. b. Mill)

Ground Wood	30.00	@	31.00
Sulphite easy bleaching	60.00	@	—
Sulphite news grade	60.00	@	—
Sulphite, bleached	77.00	@	78.00
Sulphate	60.00	@	—

Old Waste Paper
(In carload lots, f. o. b. Toronto)

Shavings—			
White Env. Cut	3.00	@	—
Soft White Book Shavings	2.85	@	—
White Blk. News	1.60	@	—
Book and Ledger—			
Flat Magazine and Book Stock (old)	1.40	@	—
Light and Crumpled Book Stock	1.25	@	—
Ledgers and Writings	1.50	@	—
Solid Ledgers	1.50	@	—
Manilas—			
New Manila Cut	1.50	@	—
Printed Manilas	1.00	@	—
Kraft	2.25	@	—
News and Scrap—			
Strictly Overissue	.85	@	—
Strictly Folded	.85	@	—
No. 1 Mixed Paper	.65	@	—

Domestic Rags
(Price to mills, f. o. b. Toronto)

No. 1 White Shirt Cuttings	.09¾	@	.10
Fancy Shirt Cuttings	.06	@	.06¼

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PAPER TRADE JOURNAL
ESTABLISHED 1872

THE INTERNATIONAL WEEKLY OF THE PAPER AND PULP INDUSTRY AND THE PIONEER PUBLICATION IN ITS FIELD

FIFTY-EIGHTH YEAR

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